NOVEMBER, 1960

THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

New development in lumber sorting is an automatic unit equipped with a memory system. Its builders say it will replace almost as many men as the number of sorts it performs. The unit speeds sorting and requires one-third the space of a green chain.
Pg. 40

New use for sawdust is a "compacted blanket" spread over swampy area to "float" paved highway. On a British Columbia job, 300,000 cubic yards of sawdust was so used. Fill and drainage requirements were reduced. A substantial cost saving resulted. The cedar sawdust is expected to last as long as the road it carries.
Pg. 42

New product from a little-used species is being produced at Abitibi Corp's board plant in Sturgeon Falls, Ont. After years of research the company developed a method to process small poplar trees and peeler cores into a quality board called "Platewood."
Pg. 54

WHAT'S NEW . . . Industry Trends charts curve of industry business (Pg. 6) . . . **Significant News** reports the latest, important industry news (Pg. 8) . . . **Lumber Stocks** tells current market trends (Pg. 70) . . . **Machinery and Supply** section reports on new machines to help you (Pg. 74). These important departments appear in every issue of.

THE Lumberman

Ben H. Chaney, in charge of maintenance, Cheney Port Mill, Inc., Tacoma, Washington.

"UNOBA...can save a lot of grief"

"For general mill use you just can't beat the performance of Union Oil lubricants.

"Take these bearings under our mill—water is constantly flooding them, yet a shot of Unoba F-1 Grease twice a week gives efficient protection. I've replaced one of these bearings in the past five years. Union's Marok is the lubricant we use on the chains and that oil really stays with 'em.

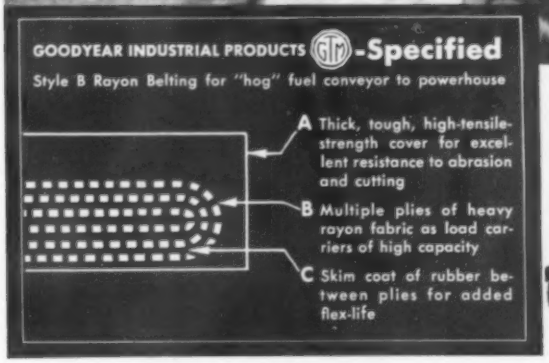
"I use Unoba F-1 throughout the mill as it not only protects bearings from water, but also from heat and high RPMs on edgers and planers. Believe me, you can save a lot of grief by using one good grease...Unoba."

Mr. Chaney is right! Using Unoba Grease in your mill *can* save you a lot of grief. That's because Unoba F-1 is exclusively formulated of high V.I. 100% pure paraffin base oils, barium-lithium soap bases, plus the most effective oxidation inhibitors to resist severe heat, moisture, shock and corrosion conditions. Try it and be convinced.

UNION OIL COMPANY OF CALIFORNIA 76

UNION OIL CENTER, LOS ANGELES 17, CALIFORNIA

Service so severe it shredded a belt in only 3 seasons was just part of the problem at this big Northwestern lumber mill. For there'd been almost constant maintenance problems, too—many of them over the belt's failure to track and trough properly. But then the G.T.M.—Goodyear Technical Man—appeared on the scene. His recommendation: install rugged yet flexible Style B Rayon Belting to carry their "hog" fuel to the powerhouse. Result: although the G.T.M.'s belt has already put in longer service than its predecessor, it scarcely shows a sign of wear. And even though it operates without a cover—exposed to summer rains and winter snows in turn—it's needed virtually no maintenance of any kind.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Style B Rayon Belting for "hog" fuel conveyor to powerhouse
A Thick, tough, high-tensile-strength cover for excellent resistance to abrasion and cutting
B Multiple plies of heavy rayon fabric as load carriers of high capacity
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To head off a costly trial-and-error experience with any kind of industrial rubber product, check over your problem with the G.T.M. *first.*

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OK cutter designed for generated head

OK patented easy-edging cutter with filler plate to match. This eased edged knife can be used in any standard corrugating side head, thus eliminating the expense of special heads.

These OK splitter knives are carried in stock ready for immediate delivery. Sizes for 1/4" and 5/16" kerf.

all surfaces are ground to produce a better edge

Particular attention is given to the **GRINDING** of all corrugations to insure a perfect fit in your cutter head. All OK Cutters are made of OK No. 6 grade of hardened and tempered steel. They are designed to stand up under high speeds and heavy feeds without breaking, and to hold an edge for extremely long runs.

For complete information write Dept. ***R-40***

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Roddis Lumber & Veneer Company at the Sault Ste. Marie, Ontario, Canada handles approximately 20 million board feet of logs a year. Two Northwests deck, undeck and feed the logs to the pond. Each rig handles 150,000 board feet per shift. Logs are white pine many of them running to 1000 bd. ft.

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Northwests are built for the rugged work of handling logs, whether at the mill or in harvesting. Machinery Bases and Machinery Side Frames are heat treated alloy cast steel. They eliminate the rebuilding problems that often occur with structural members. The Feather-Touch Clutch Control is sensitive — you have the feel of the load and, in combination with the big, smooth working swing clutches, handling big timber is a faster, safer operation. There is ample clutch capacity for smooth operation whether on the level or on the uphill operations so often characteristic of log loading work. Boom hoist equipment is heavy duty — the kind that will stand hour after hour operation and make the reaches easy.

Northwest Crawlers, with self-cleaning action and with travel gears fully enclosed and running in oil, mean the minimum in track troubles. These are the things that get things done — the things that let you say, "That Northwest is always ready to go." They are a small part of the advantages that make the Northwest the finest machine of its kind.

There are new Northwest log loader features that will interest you. Ask a Northwest man.

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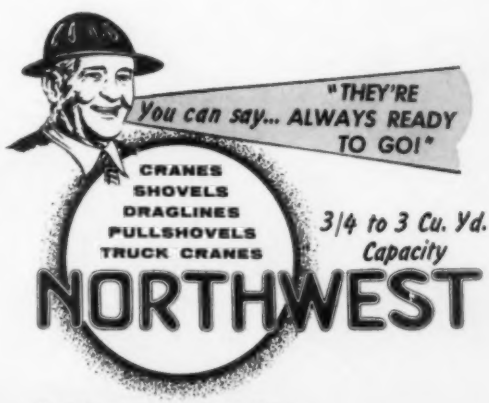

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L-25-12-1G

engine power
BY CATERPILLAR

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They provide the amount of power you need (your Caterpillar Dealer will help determine your *exact* needs). Cat Diesel Engines operate reliably under severe conditions—from extreme cold to extreme heat. They operate efficiently on the lower cost fuels including No. 2 furnace oil. They're famed for dependability and the routine maintenance they need is done quickly and easily. Your Caterpillar Dealer insures you of genuine factory parts and authorized service wherever you move your equipment.

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We've done a lot to make our engines even more portable. And we're doing even more. Advances like turbocharging, for example, give you more power in more compact engines.

There's no end to our research into ways of improving the horsepower-to-weight ratio of Cat Diesel Engines. The result is engines that cost less per horsepower to buy and to operate. They're engines that cost less to move. They're compact, high-horsepower engines that are completely modern in every way.

Before you make your next move, you may find it profitable to look into these engines at your Caterpillar Dealer's. He can probably give you some profitable new ideas about the meaning of portability. If you'd like more information, write to us for "More Board Feet . . . Less Cost" . . . a helpful booklet for men in the lumber industry.

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Engine Division, Caterpillar Tractor Co., Peoria, Illinois, U.S.A.

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November, 1960

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THE Lumberman

LUMBER PLYWOOD BOARD WOOD MANUFACTURING

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New Mill Adds Profit for McClure Lumber Co., Charlotte, N. C., which cuts quality lumber products for sale in its retail operations. 36

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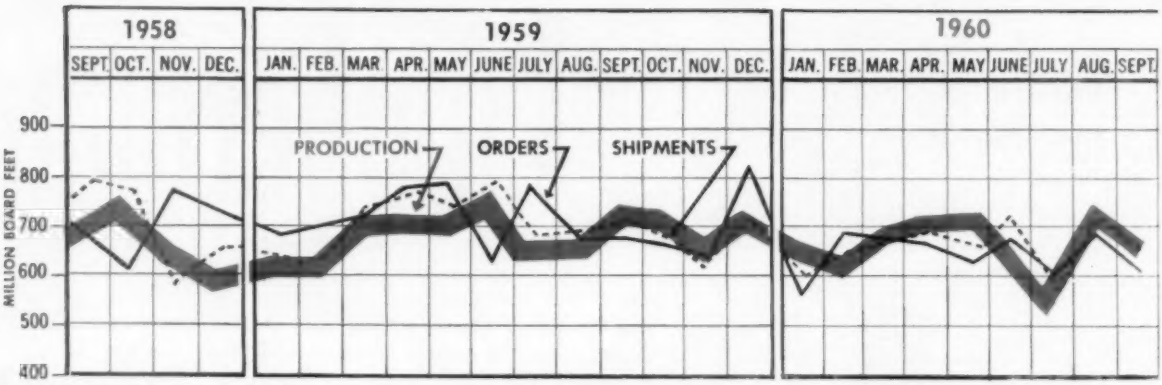
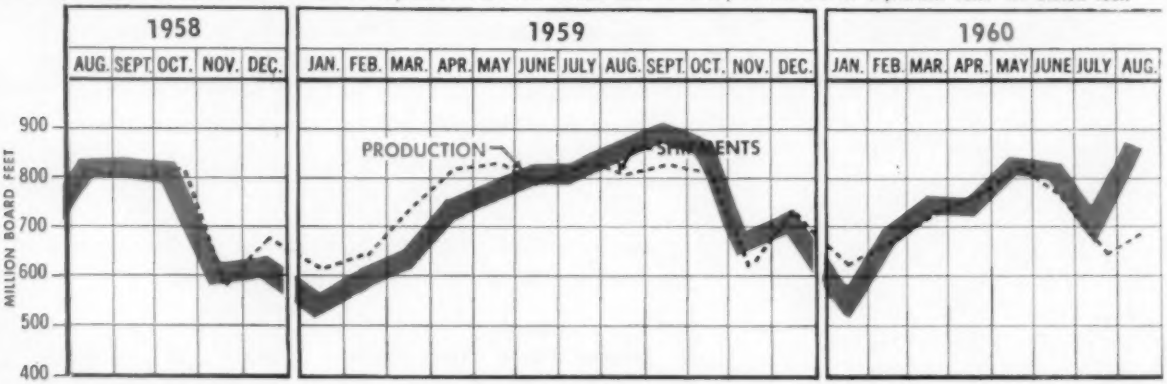
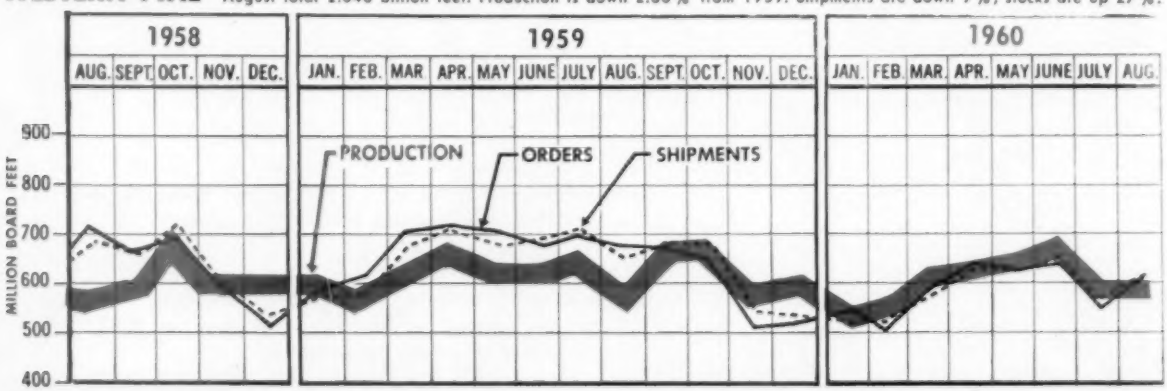
INDUSTRY TRENDS



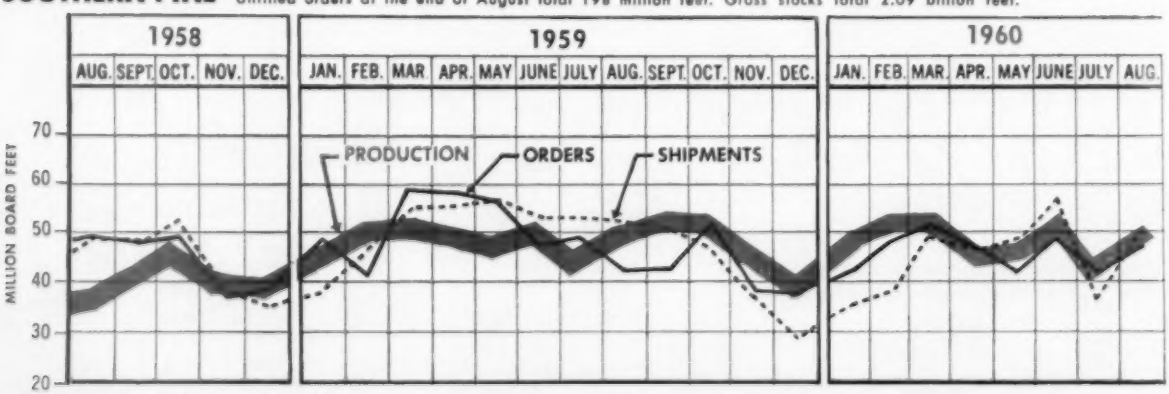
DOUGLAS FIR Production for nine months totals 6.213 billion feet, orders 5.853 billion feet, shipments 6.109 billion feet. Unfilled orders at the end of September total 447 million feet. Inventory at the end of September total 1.1 billion feet.



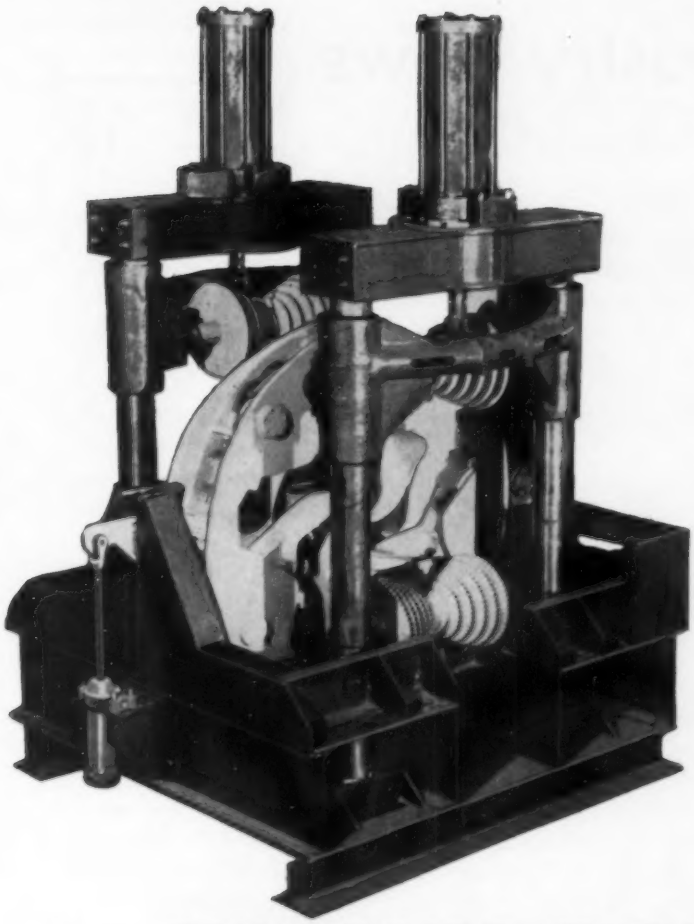
WESTERN PINE Lumber production for eight months totals 6.026 billion feet, shipments 5.796 billion feet. Stocks at the end of August total 2.046 billion feet. Production is down 2.06% from 1959. Shipments are down 9%, stocks are up 27%.



SOUTHERN PINE Lumber production for eight months totals 4.83 billion feet, shipments 4.68 billion feet, orders 4.68 billion feet. Unfilled orders at the end of August total 198 million feet. Gross stocks total 2.09 billion feet.



REDWOOD Lumber production for eight months totals 407.4 million feet, shipments 398.7 million feet, orders 403.6 million feet. Unfilled orders at the end of August total 64.7 million feet. Gross stocks total 361.8 million feet.



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Self-contained barking ring

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significant industry news

General Outlook . . .

HEARST HOLDINGS REVEALED . . . Hearst Corp. now holds a substantial interest in Southwest Forest Industries, Inc., Phoenix, Ariz., and has an option to acquire more stock, it was disclosed by EDITOR AND PUBLISHER magazine. Hearst holds 100,000 shares and has an option to purchase an additional 105,000. The Hearst holdings were disclosed with the recent election of Richard E. Berlin, president of Hearst, as a director of Southwest.

WOOD IN SCHOOLS . . . This major market for wood products will be promoted at the National Retail Lumber Dealers Assosiation's annual meeting in San Francisco, Calif., with a dealer clinic to be held daily on "Wood Products Promotion for Profit." The emphasis will be on school construction. The clinic is sponsored by the National Lumber Manufacturers Association and will feature a panel discussion by two school architects, a wood technologist, a lumber dealer experienced in school work and a promotion-merchandising expert. Clinics are scheduled November 13 through 16.

CANADIAN HOO HOO WINS . . . The Vancouver, B. C., Hoo Hoo club won the 1960 International Award of Merit for Wood Promotion made at the annual meeting of International Order of Hoo-Hoo. Activities of the club which helped win the award are provision of "Wood Use Manuals" for industrial arts classes in B. C. high schools, a $100 prize for the best wood project submitted by a class or individual student; two $250 University of B. C. scholarships in lumber merchandising and architecture, and a series of three lectures on "Wood Construction," "Plywood Usage" and "Laminated Structures" directed at architects, engineers and specifiers in the construction field.

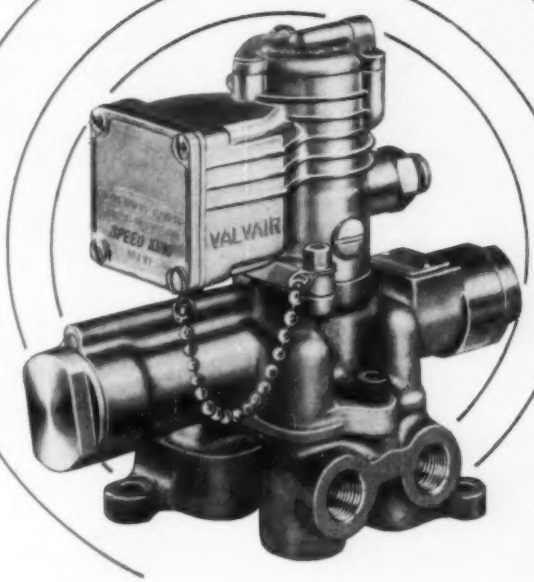
"BUSY ACRES" EXPANDING . . . The how-to-do-it education program of American Forest Products Industries which leads to full-fledged tree farming will soon be launched in Texas and South Carolina. Early in 1961 Arkansas, Wisconsin, Massachusetts, Maryland and Illinois are expected to follow. Since the program was launched last year in North Carolina, numerous states have indicated an interest in the "Busy Acres" program that converts idle, lazy loafing acres into timber-producing land.

INDUSTRY PROFIT RATES . . . Profit rates for corporations in the lumber and wood products industry showed some improvements between the first and second quarters of 1960, but are still substantially below the 1959 level, the National Lumber Manufacturers Association reports. The Federal Trade Commission and Securities and Exchange Commissions says corporate net profits after taxes were 2.7% of sales in the second quarter vs. 1.7% in the preceding quarter and 4.7% in the second quarter last year. In the first six months of 1960 sales of lumber and wood products corporations are estimated at just over $3 billion, 2% below 1959's first half.

TURN-ABOUT . . . Contrasting with the many reports indicating an increase in the number of foreign machine tools and components for machines being sold in the United States, Ohio Knife Co., Cincinnati, Ohio, announces an increase in its shipments of planer knives, veneer knives, hog knives and chipper knives to countries abroad.

More INDUSTRY NEWS on page 10

No coil burnout with SPEED KING®



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For multi-million cycle dependability, specify Valvair® SPEED KING control valves.

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Write for free Bulletin SK-100. Address: Bellows-Valvair, Akron 9, Ohio, Dept. LU-1160.

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AKRON 9, OHIO
DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION (IBEC)

WESTERN PINE DIPS . . . The third quarter saw the sharpest year-to-year drop in production and shipments experienced by the Western Pine industry in a long while, the Western Pine Association reports. Main reason in the slump in housing starts. Third quarter shipments of 2.11 billion feet are off 17.5% from a year ago. Production of 2.29 billion feet is off 15.1%. Totals for the first nine months are somewhat better. Shipments of 6.46 billion feet are down 10.2%, production of 6.75 billion feet is down 5.8%. Stocks of 2.11 billion feet compare with 1.69 billion a year ago. The association estimates that fourth quarter shipments will be about 1.85 billion feet, 15% below a year ago.

LAMINATED HARDWOOD BLOCK FLOORING STANDARD . . . Quality criteria for this product is covered by a recommended Commercial Standard now being circulated to the industry for approval, reports the Commodity Standards division, Business and Defense Services Administration, U. S. Department of Commerce. The standard covers tongued and grooved 9x9-inch by 15/32-inch hardwood plywood blocks in two grades with unfinished or prefinished faces. It is requested by the Hardwood Plywood Institute.

At the Plant Front . . .

$650,000 SAWMILL PLANNED . . . A small log mill at Trout Creek, Mont., will be built by George Reller and his sons, Glen and Dale, Portland, Ore. The mill will use logs ranging from 5 to 18 inches which will be purchased by the cord. Initial production will be form 20 to 25 million feet a year. The mill will have a twin band headrig and resaw. It will also have a barker and chipper and will sell chips to Waldorf-Hoerner Paper Co., Missoula, Mont. A glue up process is planned in the future.

C-Z TRIES PORTABLES . . . Experimental canting in the woods is being tried by Crown Zellerbach Corp. on its Olympic Tree Farm in eastern Jefferson county in Wash. The two units, located adjacent to second growth Douglas fir thinning projects, handle logs from 5 to 10 inches in diameter. Cants go to nearby mills for resawing.

G-P, RITTER MERGE . . . Stockholders of Georgia-Pacific Corp., Portland, Ore., and W. M. Ritter Lumber Co., Roanoke, Va., have approved a merger of the two firms. The stock exchange will involve one share of Ritter for 1.6 G-P shares. The merger is subject to approval by the Securities and Exchange Commission.

EASTERN FIRM PURCHASED . . . Lumber Industries, Inc., New York City, has acquired Gordon Lumber Co., Inc., Baltimore, Md., and Detroit, Mich., and will operate it as a subsidiary. Gordon L. Munderloh of Baltimore will continue to head the division. Lumber Industries is a national sales organization composed of regional wholesalers who have integrated and centralized their purchasing, financing and office functions.

KENTUCKY MILL SOLD . . . Inter-Mountain Coal and Lumber Co., Putney, Ky., has been purchased by a group headed by T. M. Millett of Millett Hardwood Lumber Co. The firm will be operated under the name of Harlan Hardwoods, Inc. The mill, which cuts about 5 million feet of Appalachian hardwoods a year, will continue to operate and some modernization will be undertaken in the future.

More INDUSTRY NEWS on Page 12

SPECIFICALLY DESIGNED FOR HIGH IMPACT AND TENSILE LOADS, DURABILITY, AND EASY MAINTENANCE!

LINK-BELT'S WS welded steel drag chain

Link-Belt WS steel drag chain consists of tough, all-steel, welded offset links connected by large-diameter steel pins. The materials, design and construction of these chains provide exceptional resistance to impact loading and wear.

Gives you low operating costs

The favorable strength-weight ratio and unique design of WS drag chain, with welded steel construction and full length bearing area for pins, result in low conveyor operating costs and easy handling during installation, replacement, or repair. Trough wear is reduced because of the lower chain weight. Symmetrical design, with identical sliding area top and bottom, permits turning the chain over for added service life. Special attachments can be welded to WS steel chain and reworking in the field is easily accomplished if the links are distorted or damaged in operation.

For complete information on Link-Belt's new WS welded steel drag chain, write for Folder 2772. Or call the Link-Belt office or authorized stock-carrying distributor nearest you. You'll find them listed in the yellow pages of your telephone directory under CHAINS.

H combination drag chain

H drag chain

OTHER DEPENDABLE LINK-BELT DRAG CHAINS... H combination drag chains with malleable or Promal (pearlitic malleable) center links connected by heavy steel sidebars with large diameter steel pins, and the H drag chains with malleable or Promal offset links having cast lugs to prevent rotation of the steel pins in the sidebars. All three drag chains operate on the same sprockets.

LINK-BELT

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ACQUISITION APPROVED . . . Directors of American Forest Products Corp., San Francisco, Calif., have approved a plan by which the firm will acquire all outstanding capital stock of Pine Logging Company of California in a $1.4 million stock exchange plan. American Forest Products acquires a sawmill at Shaver Lake and a planing mill, remanufacturing plant, dry kilns, storage and shipping facilities in Fresno. Pine Logging will operate as a subsidiary. Veteran lumberman Robert Grimmett, founder and president of Pine Logging, continues as an executive officer and consultant.

SOUTHERN MILL EXPANDS . . . The Packaging division of Olin Mathieson Chemical Co. has completed a $325,000 improvement program at its Huttig, Ark., sawmill. The work was aimed at improving storage and handling facilities and includes a new shipping and loading dock 85x500 feet, a warehouse featuring creosote pole-type construction and laminated beams spanning 50 feet which can house 4 million feet of finished lumber, and new equipment for mechanical loading of flatcars with packages of lumber. The facilities can now handle more than a million board feet of raw and finished lumber products each week.

PULP MILL DECISION NEARS . . . Canadian Collieries Resources, Ltd., Vancouver, B. C., with sawmills at New Westminster and Port Moody and a plywood plant at New Westminster, will probably decide before the end of the year whether to build a pulp mill near Union Bay, east coast of Vancouver Island. Studies on the project will soon be completed. A plant costing about $20 million is being considered. President Norman R. Whittall says "We are selling large quantities of pulp chips now. We might as well use them ourselves and get the extra revenue."

VENEER PLANT OPERATING . . . Green veneer from the new plant at Row River, Ore., which recently started producing, will go to Corvallis, Ore., where it will be laid up at the Plywood Products Corp. plant. The plant is under the direction of John S. Brandis, Georgia-Pacific executive.

Personalities . . .

HAMMERSCHMIDT NEW SNARK . . . Ernst W. Hammerschmidt, 43385, Lombard, Ill., retailer, is the new Snark of the Universe. He was picked at the 69th annual convention of the International Concatenated Order of Hoo-Hoo meeting in Hot Springs, Ark., late in September. Emphasis at the 3-day meeting was on continuance of the Order's Wood Promotion Program.

MICHEL HEADS HARDWOOD GROUP . . . K. R. Michel, president of Michel Lumber Co., Oswego, Ore., has been elected president of the Northwest Hardwood Association. LeRoy R. Smith, L. R. Smith Hardwood Co., Shelton and Longview, Wash., is vice-president.

JOBBERS ELECT . . . Arne C. Kindem, Andrew A. Kindem and Sons, Inc., Minneapolis, Minn., was elected president of the Northern Sash & Door Jobbers Association at its annual meeting in Chicago. Donald J. Porter, Porter-Hadley Co., was named vice-president.

MANAGER NAMED FOR NEW PLANT . . . Warren E. Hoyt, a veteran of 40 years in the wood preservative field, has been named sales manager of the Wood Treating division of Southwest Forest Industries, Inc., Phoenix, Ariz. Southwest's wood treating plant, now under construction at Prescott, Ariz., will chemically treat railroad ties, telephone and electric utility poles, fence posts, highway guard rail posts and barn poles against insects and exposure to weather.

Signode Way Saves Time, Money

...reduces shipping and handling problems by compression strapping of studs

In the operation shown above, studs are carried from an automatic stacker and placed in a compression strapping machine developed by Sun Studs with the assistance of Signode's field engineering service. Each stack is compressed from all four sides under thousands of pounds of pressure. Signode steel strapping holds this compression to destination. Coring is eliminated.

The result is a tight, compact unit that is handled quickly and efficiently with mechanical handling equipment. Carloading time is reduced to one hour for double door or single door cars. Signode's method of staggering tiers against each side of the car to form a solid load eliminates side shift, while interlocking of tiers with heavy duty steel strapping prevents end shift.

The use of compression strapping and this special loading technique practically eliminates impact damage enroute and assures the arrival of lumber in condition for mechanical handling by the receiver. Unloading time is reduced to less than two hours, drastically cutting costs. There is no spilling or retallying. Orders can be filled quickly and easily.

For help in planning a packaging system that will save time and money in your operation and speed up delivery to the customer, write Signode.

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Portland 8, P. O. Box 4226 • Seattle 4, 1750 Occidental Ave. • Spokane, 617 Paulsen Bldg.
Canadian Steel Strapping Co., Ltd., Vancouver, B. C.

Crown-Zellerbach selects... the LUMBER-JACK method of log handling

Crown-Zellerbach's new LJ-370 in operation in Columbia City.

The LJ-318, with forks extended.

The LJ-330 utilizing its four-foot forward extension.

Crown-Zellerbach has joined other major Northwest lumber companies in a modern new method of log handling, made possible by the Wagner Lumber-Jack.

Right now, three Lumber-Jacks are sharing all log handling jobs at Crown's new plant at Columbia City, Oregon.

Prior to purchasing these machines, Crown-Zellerbach spent over three months in researching log handling equipment all over the world.

After extensive testing, they decided that the Lumber-Jack had the speed, maneuverability, dependability and easy, low-cost maintenance to keep pace with the new concepts of the Columbia City operation.

The reasons for the Wagner Lumber-Jack's increasing popularity are simple: The Lumber-Jack is made in the heart of the lumber country by men who know and understand the problems of the logging industry. The Lumber-Jack is designed to handle ALL mill jobs (loading, unloading, scaling, cold decking, sorting) with greater dependability and more economy than machines of far less versatility.

WAGNER Lumber-Jack

For complete details on the Wagner Lumber-Jack, write...

NELSON EQUIPMENT COMPANY
955 N. E. Union Avenue, Portland, Ore.

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WAGNER TRACTOR COMPANY
P. O. Box 7444, Portland, Oregon

you can't beat Simonds Circular Saws

Take Simonds famed line of solid tooth, Red Center Saws — they cut wood fast and straight . . . they stay sharp, hold their corners . . . have longer overall life. Starting with its own special alloy steel and using its own heat treating techniques, Simonds develops a saw plate that stays flat, holds tension much longer than ordinary saws.

Add to this Simonds years of toothing, grinding and sharpening know-how and you're sure of the very best in quality and exactly the right type saw for your particular job.

Or, if you need the special, long-lasting qualities of Carbide Tipped saws, you can't beat Simonds. Made with an extra tough plate steel, Simonds features wear-resistant carbide tips that have identical clearance angles so that every tooth does its share of the work.

Whether you're cutting hardwood, softwood, plywood, hardboard, plastics or any composition materials, there's a Simonds Carbide-Tipped Saw just right for your needs.

Most sizes and types of both solid tooth and Carbide Tipped saws are available from stock at your local Simonds Distributor.

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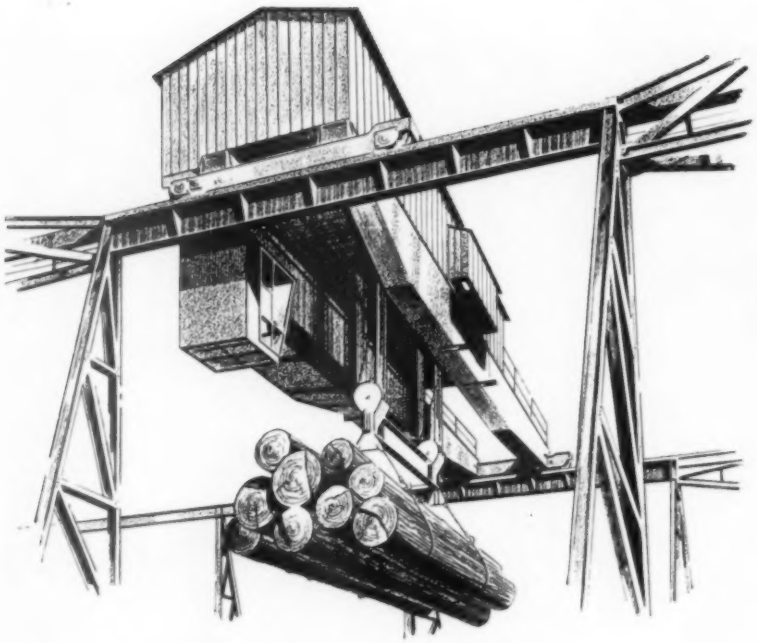

Log-handling is cheaper by the load

This 60-foot span crane was "job-engineered" by EDERER for service at a paper mill. It moves logs from the pond or unloads from trucks or cars to the log deck . . . handles full loads at one lift—up to the crane's 50-ton capacity. This faster, smoother log-handling saves time and money.

The crane has double drum fixed hoist and spreader bar. The bridge moves from pond, over tracks and to log deck. Hoist and controls are completely housed for service in any kind of weather.

EDERER "job-engineers" equipment for the forest products industries for many such specialized uses. Why not discuss YOUR special job requirements with an EDERER engineer?

Inquire about our complete line of light duty cranes from 3- to 20-ton capacity.

EDERER Cranes

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Since 1901 — "JOB-ENGINEERING" CRANES AND HEAVY EQUIPMENT

INDUSTRY MEETINGS

NOVEMBER

American Forest Products Industries, Inc., November 2-3, annual meeting, Shoreham Hotel, Washington, D. C.

Washington State Forestry Conference, November 4, Seattle, Wash.

Forest Industries Radio Communications, Nov. 10-11, Willard Hotel, Washington, D. C.

National Lumber Manufacturers Association Committees and Board of Directors Annual Meeting, November 7-10, Shoreham Hotel, Washington, D. C.

California Forest Pest Control Action Council, November 10, Calif. Department of Agriculture Building, Sacramento, Calif.

American Hardboard Association, November 10-11, annual meeting, Drake Hotel, Chicago, Ill.

Forest Products Research Society, The Carolinas-Chesapeake Section, November 10-11, Hotel Carolina, Raleigh, N. C.

National Retail Lumber Dealers Association, November 13-16, annual meeting, Fairmont Hotel, San Francisco, Calif.

Society of American Foresters, November 13-16, annual meeting, Sheraton Hotel, Washington, D. C.

Southern Sash & Door Jobbers Association, November 13-15, annual fall meeting, The Greenbrier, White Sulphur Springs, West Va.

National Wooden Pallet Manufacturers Association, 4th Annual Wooden Pallet Manufacturing and Promotion Clinic, November 14-15, U. S. Forest Products Laboratory, Madison, Wis.

National Building Material Distributors Association, November 16-19, annual meeting, Palmer House, Chicago, Ill.

Southern Woodwork Association, fall meeting, November 16-17, Henry Grady Hotel, Atlanta, Ga.

DECEMBER

Western Forestry & Conservation Association, annual conference, December 7-9, Empress Hotel, Victoria, B. C.

Wirebound Box Manufacturers Association, annual meeting, December 8-9, Sheraton Blackstone Hotel, Chicago, Ill.

Tacoma Lumbermen's Club, annual banquet, December 9, Winthrop Hotel, Tacoma, Wash.

Red Cedar Shingle Bureau, annual meeting, December 9, Olympic Hotel, Seattle, Wash.

California Redwood Association, board of director's meeting, December 12, 576 Sacramento St., San Francisco, Calif.

National Oak Flooring Manufacturers Association, annual meeting, December 13-14, Hotel Peabody, Memphis, Tenn.

JANUARY 1961

Yale-Oregon State College Industrial Forestry Seminar, Jan. 16-27, OSC School of Forestry, Corvallis, Oregon.

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COSTS
with Standard's new
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Hundreds of kiln operators are increasing output, improving quality, reducing drying time with the new Standard modernization program. If you are operating older kilns with line shaft fans, external blowers or natural draft, you can convert them easily and economically without major structural changes with the Standard Modernization Plan. Write for it today.
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1961's GREATEST SHOW ON WORTH!!!

1961 CHEVROLET STURDI-BILT TRUCKS! PROVED WORTH MORE BECAUSE THEY WORK MORE

A gigantic advance in trucking began just a year ago, when the first Torsion-Spring Chevy nosed out onto a highway. With a vastly different truck design, featuring torsion-bar independent suspension, this totally new Chevy did just about everything better. And it caught on fast. So fast, in fact, that already there are nearly 300,000 Torsion-Spring Chevies putting out this new kind of working ability on tough jobs all over America. Now, for 1961, Chevrolet introduces trucks with even more of the worth-more, work-more performance that's won such wide owner acclaim over the past year. Even more strength, even more stamina—and an even wider range of models!

MORE MODELS THAN EVER BEFORE! 189 models—work-proved dollar savers in every weight class! 1961 Chevies for every hauling chore in the book include three new long-wheelbase 4-wheel drive models, sturdy Stepside and Fleetside pickups, spacious panels, versatile Suburban Carryalls, handy Step-Vans and forward control chassis, tough chassis-cabs of all sizes, mountain-moving tandems. Somewhere in this long, *long* line is the one truck that makes the most sense on your job!

OWNER-PROVED TORSION-SPRING RIDE! It puts an end to I-beam axle shimmy! Independently suspended front wheels step right over bumps, tough torsion-bar springs soak up jolts. New smoothness speeds up schedules, cuts truck wear and maintenance expense, reduces cargo damage and driver fatigue. Owners report that there's never been anything like it for high-profit hauling!

STRONG, ROOMY CABS THAT HELP BOOST YOUR WORK OUTPUT! Rangy drivers ride in comfort with extra hip room, leg room and head room. Seeing is safe and easy through a whopping big wraparound windshield. The seat's a beauty, too—a full 59½" wide with a spring combination inside that gives just the right support. (And for the last word in working comfort, special 6" foam rubber padding is optional at extra cost.) And the *rugged* cab build includes all-steel construction, double-panel roof and double-walled cowl housing.

TOUGH TRUCK CHASSIS—BRAWNY BASIS FOR BIGGER PROFITS. Massive, truck-built frames add stamina to every chassis. In medium- and heavy-duty models, rugged self-adjusting variable-rate rear springs help smooth out big-tonnage hauls. Quality features galore boost truck life: Extra-big brakes give faster, surer stops and last longer. Precision wheel balance makes steering easier, lengthens tire life. Smooth, durable Synchro-Mesh transmissions come in sizes to suit all types of duty.

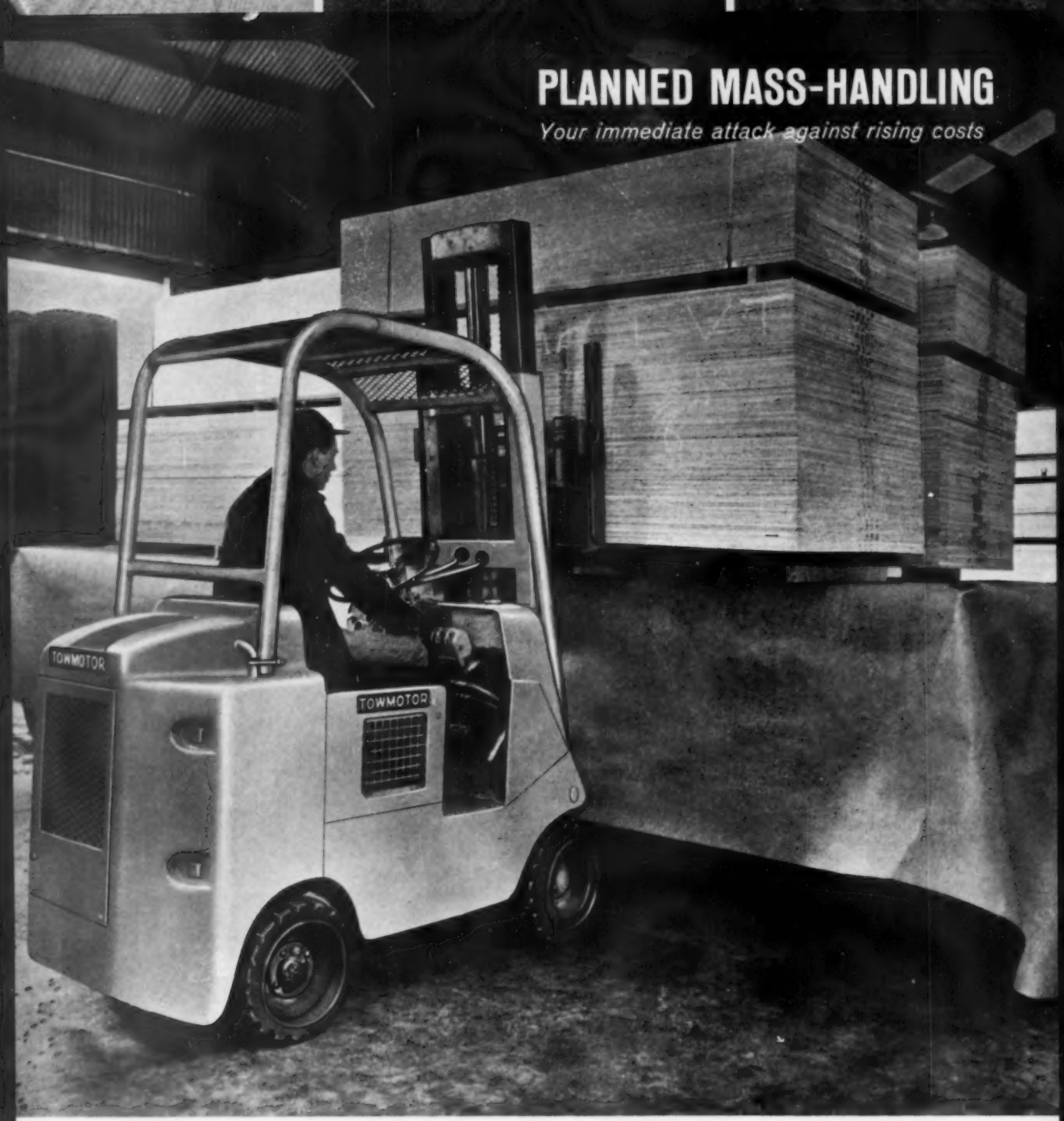
ENGINES WITH PROVED EARNING POWER. Famous sixes that out-sell all others because they're best at brightening cost records . . . big V8's that lead the industry for short-stroke design and hard-working durability! Chevy for '61 offers a *long* line of power plants to meet the special needs of every weight class.

The truth is, we could fill every page in this magazine with reasons why Chevrolet trucks have never been better than they are for '61, but there's no need for that. Not when your Chevrolet dealer can boil it all down for you so quickly and pleasantly. See him soon and start saving soon! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET

PLANNED MASS-HANDLING

Your immediate attack against rising costs



YOU GET A BRAND-NEW IDEA of fork truck versatility when Towmotor equipment does your handling—when materials are unloaded, products are stored and shipments are loaded by powerful lift trucks made for multiple-duty work. New Towmotor units and accessories, specially designed for handling products like yours, will give you an entirely new conception of profitable mass-handling methods. Write for case studies that show you how companies similar to yours are reducing costs through more effective handling operations. TOWMOTOR CORPORATION, CLEVELAND 10, OHIO.

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GRAINING MACHINE

Prepare NOW for Multicolor Printing

You can buy a single unit, two units, or three units as you choose, to print sheets or panels of any thickness up to eight inches in one, two, or three colors in close register. You can buy the first unit now and add the others at a future date. Each added color increases the beauty and true-to-life appearance of your product. Prepare now for future requirements by installing the master unit. Keep your products out in front with the appearance that compels sales. Write for further information.

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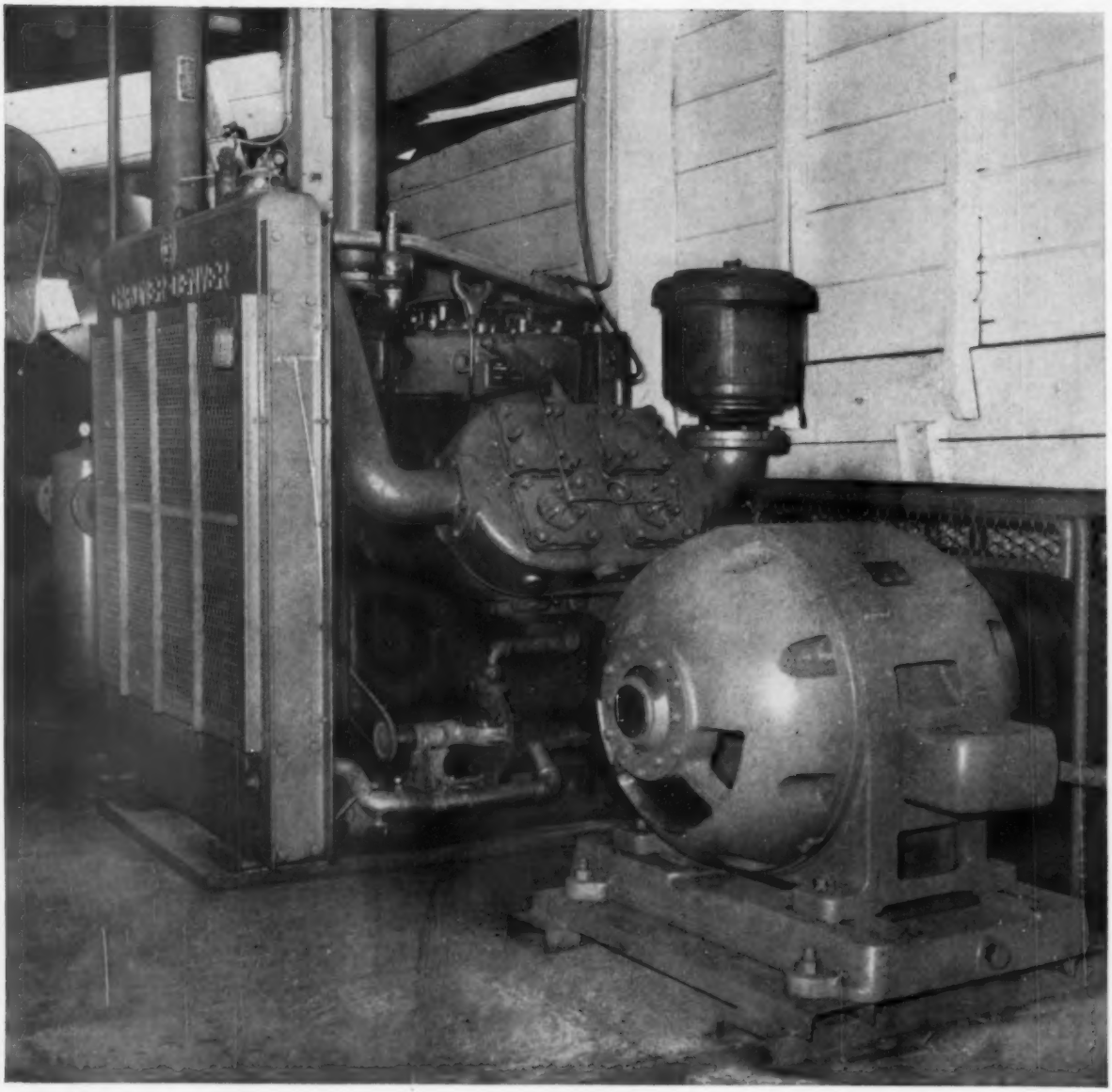

Keep mill air equipment moving with a Gardner-Denver WB

This water-cooled work horse is a Gardner-Denver WB. It's known in many a mill for its smooth performance and low-cost operation. The WB's cooling system is partly responsible for much of its popularity. The combination radiator-intercooler provides a self-contained cooling system . . . saves cooling water. Water-jacketed heads and cylinders assure lowest discharge temperatures and better lubrication. Get in touch with your Gardner-Denver compressor specialist or write for bulletin WB-10.

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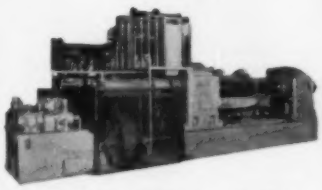
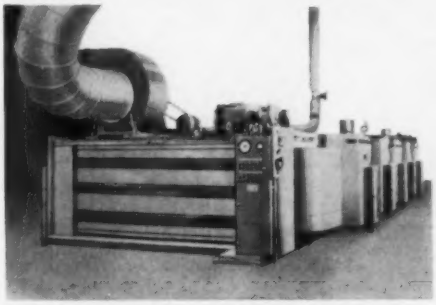
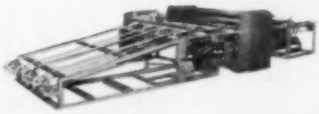


V24 Veneer Rotary Lathe



S50 Veneer Dryer

P20 Hot Press
with Loader & Unloader



V43 Veneer Auto Clipper

Taihei Machinery

Taihei **offers the best service for your projected plant with long years experience for:**

Veneer & Plywood Plant
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Particle-Board Presses
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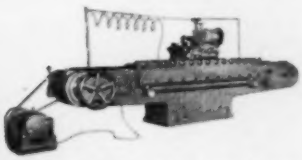
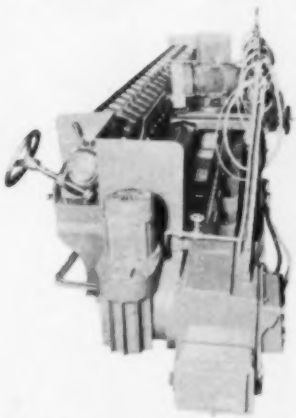
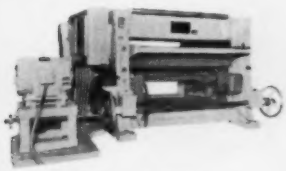


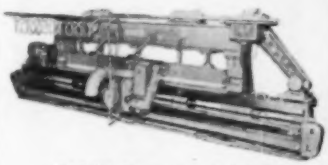
W91 Scraper Knife Grinder



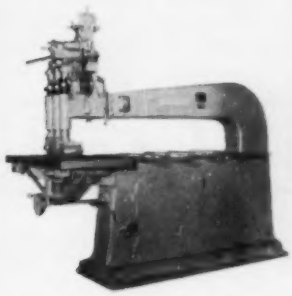
V92 Veneer Knife Grinder



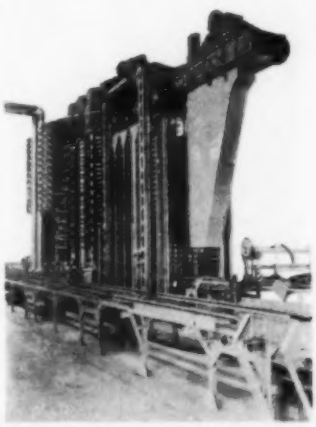
W41 Panel Scraper



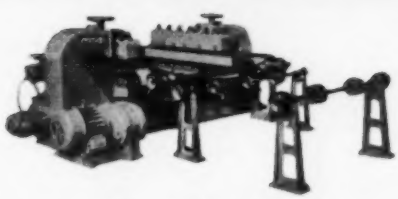
W02 Veneer Jointer



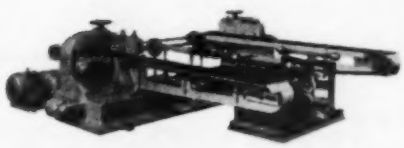
W11 Taping Machine

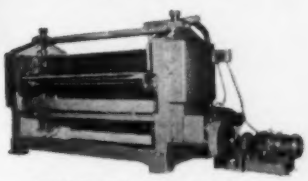


P23 Hot Press for Hard Board

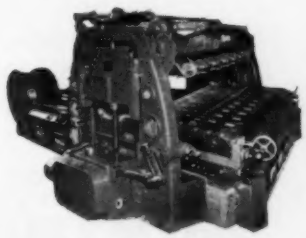


W31 Double Sizers





W22 Glue Spreader



V34 Veneer Slicer

for faster free-rolling action!

Moline
roller-top chain

Boards pull easier at the sorting table and cross handling is faster when you select Moline Roller-Top Table Chain to suit the application. And Moline offers the largest selection—three different types with either the long rollers or the new split type rollers.

Moline's new Split-type Roller Chains reduce the extra weight and friction caused by random sizes and heavy boards overlapping long rollers. Thus they materially reduce fatigue and make sorting easier and faster. No wonder Moline Roller-Top Chains are used in 75% of all table top installations in the West.

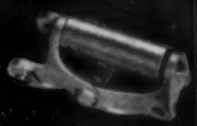
Call your local Moline Chain distributor and let him show you the advantages of various types of Moline Roller-Top Chain.

Moline Chains

MOLINE MALLEABLE IRON CO., ST. CHARLES, ILLINOIS
Specializing in the manufacture of chains

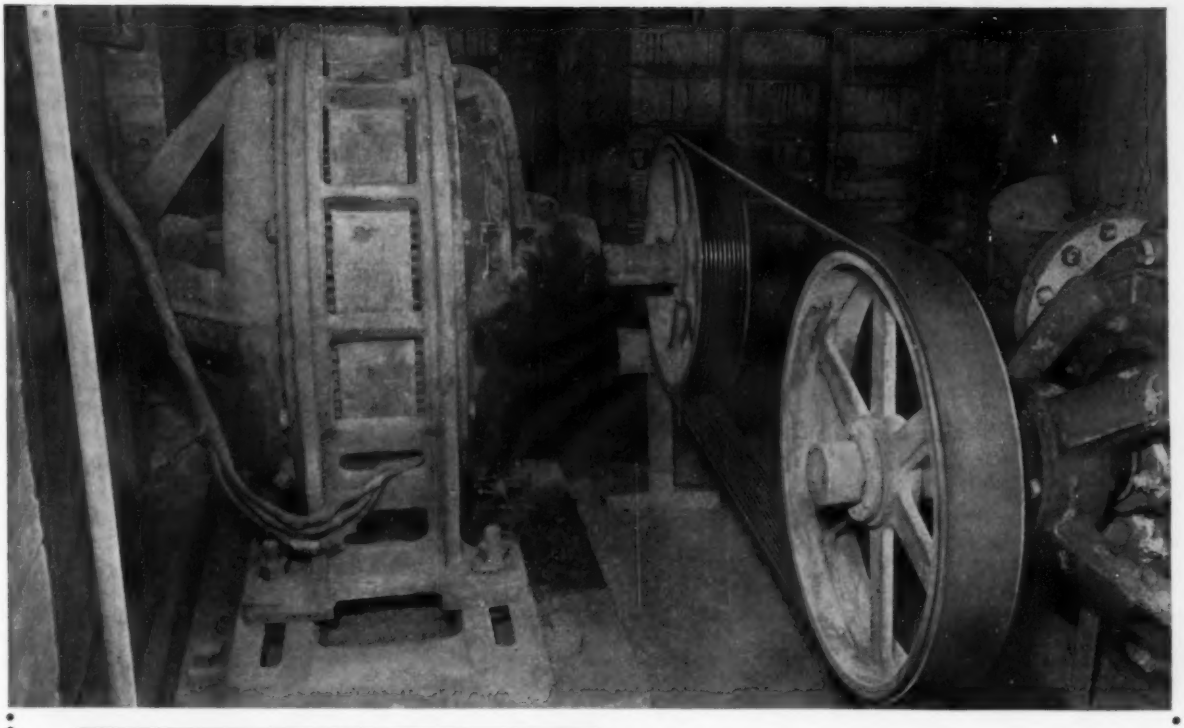
LONG OR SPLIT TYPE PEDESTAL LINKS.
Are joined together with oval links. Split type has two independent rollers on a single shaft.

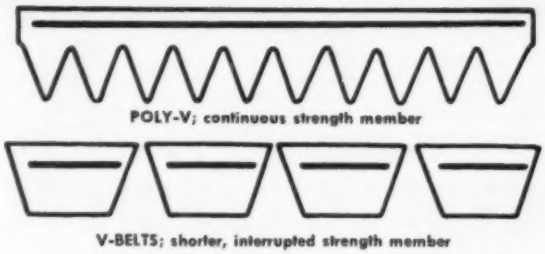
NEW H-78 RT SPLIT TYPE ROLLER.
Available in Malleable or Promal or a combination of both.



NEW H-78 SR LONG ROLLER.
(Same as above except for single long roller.)

MW-188 ROLLER TYPE CHAIN.
Combines the strength of combination chain with the utility of the roller top.





"MORE USE PER DOLLAR"

Poly-V Belt is a single unit with even, uniform pull. Uninterrupted strength member gives much higher hp capacity per inch of drive width. No belt drive delivers as much power in the same space as Poly-V!

THIS R/M POLY-V® DRIVE OUTLASTED V-BELTS 8-1!

V-belts were replaced every six months on this gas pump drive in a southern chemical plant—until the company converted to R/M's patented Poly-V Drive. The single Poly-V Belt pictured above has been in operation for over 4 years on a barium process operation. Four years for the R/M Poly-V Drive versus 6 months for an ordinary V-belt drive! The savings and advantages to production are obvious.

R/M Poly-V Drive solves difficult drive problems wherever heavy duty power transmission is required. Single unit design permits *narrower* Poly-V sheaves to deliver *equal* power in a much smaller space or much *more* power in the same space as a V-belt drive! The drive runs smoother because there's no sinking of belt in sheave grooves. Belt speed ratios remain constant from *no* load to *full* load for uniform power delivery—with less wear on belts and sheaves. V-belt "length matching" problems are completely eliminated . . . and just two belt cross sections meet every heavy duty requirement. Let an R/M Distributor show you other advantages of converting to R/M Poly-V Drive. Write for Bulletin M141.

- **More Power—Less Space**
- **Eliminates "Matching" Problems**
- **Maintains Groove Shape**
- **Assures Constant Speed Ratios**
- **Longer Belt and Sheave Life**
- **Cooler, Smoother Running**

RM1010

When You Change Drives, Convert to Poly-V and Be Sure!

RAYBESTOS-MANHATTAN, INC.

MANHATTAN RUBBER DIVISION, PASSAIC, NEW JERSEY

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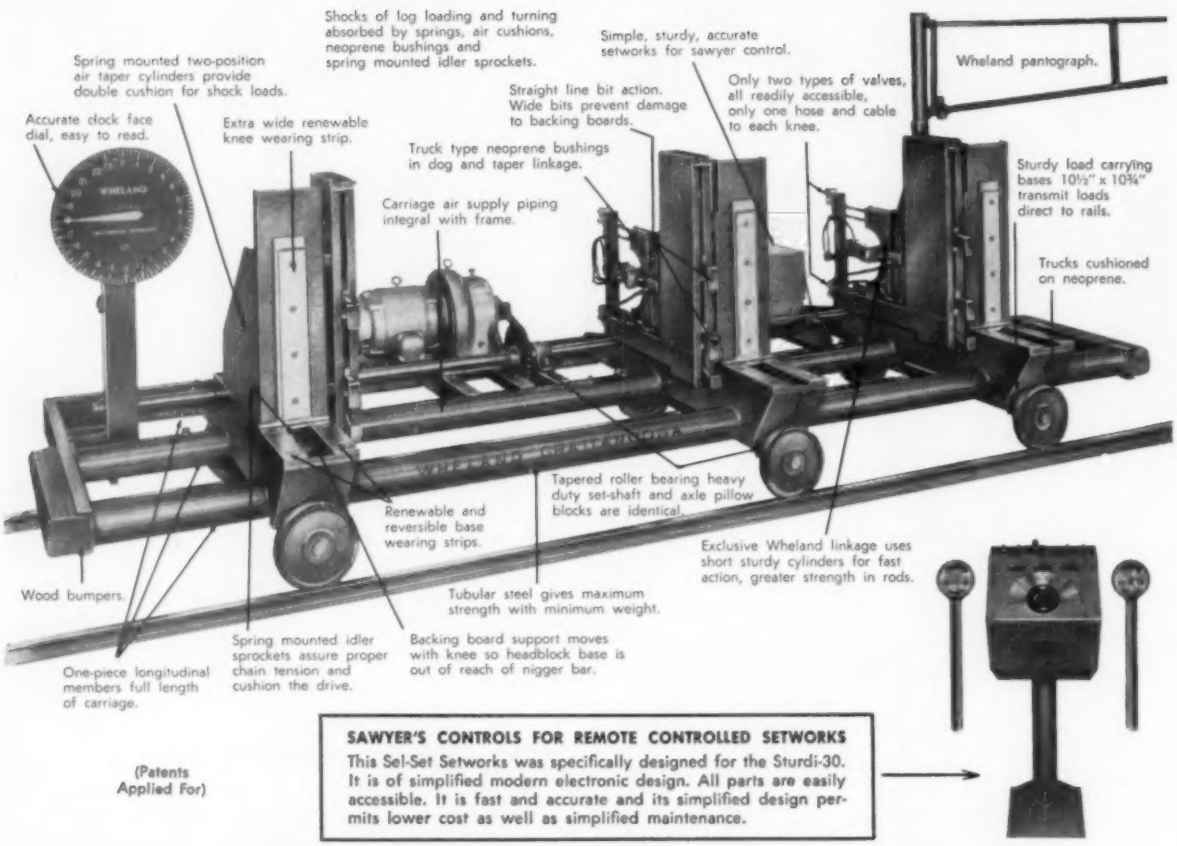
ENGINEERED RUBBER PRODUCTS ... MORE USE PER DOLLAR


Shocks of log loading and turning absorbed by springs, air cushions, neoprene bushings and spring mounted idler sprockets.
Simple, sturdy, accurate setworks for sawyer control.
Wheland pantograph.
Spring mounted two-position air taper cylinders provide double cushion for shock loads.
Straight line bit action. Wide bits prevent damage to backing boards.
Only two types of valves, all readily accessible, only one hose and cable to each knee.
Accurate clock face dial, easy to read.
Extra wide renewable knee wearing strip.
Truck type neoprene bushings in dog and taper linkage.
Sturdy load carrying bases 10½" x 10¾" transmit loads direct to rails.
Carriage air supply piping integral with frame.
Trucks cushioned on neoprene.
Tapered roller bearing heavy duty set-shaft and axle pillow blocks are identical.
Renewable and reversible base wearing strips.
Exclusive Wheland linkage uses short sturdy cylinders for fast action, greater strength in rods.
Wood bumpers.
Tubular steel gives maximum strength with minimum weight.
Spring mounted idler sprockets assure proper chain tension and cushion the drive.
Backing board support moves with knee so headblock base is out of reach of nigger bar.
One-piece longitudinal members full length of carriage.

(Patents Applied For)

SAWYER'S CONTROLS FOR REMOTE CONTROLLED SETWORKS

This Sel-Set Setworks was specifically designed for the Sturdi-30. It is of simplified modern electronic design. All parts are easily accessible. It is fast and accurate and its simplified design permits lower cost as well as simplified maintenance.

Wheland's NEW STURDI-30 CARRIAGE

This basically new carriage design has the same advantages that automobile manufacturers find in shifting from frame construction to unitized construction.

Headblock, knee, base, dogs and actuating mechanism, axle and trucks are precision built into one sturdy modular unit. These units cushion the loads and transmit them direct to the rails. In old style carriages the loads were transmitted through frames.

In these new Wheland basic units the base surfaces are precision machined, then rigidly positioned and welded to three one-piece longitudinal members.

When logs are slammed on the carriage and against the knees, the load and shock are absorbed by a series of neoprene shock-absorbing bushings and pads, and by air cushioned and spring cushioned cylinders plus spring mounting on idler sprockets.

This exclusive Wheland design gives you a lightweight carriage with 30" opening designed specifically for the smaller logs now being sawn in most areas.

The Strudi-30 has maximum strength, rigidity, ruggedness and a low rail-hugging center of gravity. It will saw accurate lumber with minimum maintenance. It has fewer parts and greater interchangeability of parts. It sets a new standard for efficiency, dependability and serviceability. It is lower in first cost and in operating cost. We will rush the details of this great new carriage to you on your request.

Individual dog packages are available to replace defacing type dogs on existing carriages. This new dogging system sets a new standard for simplicity, accuracy, ruggedness and dependability.

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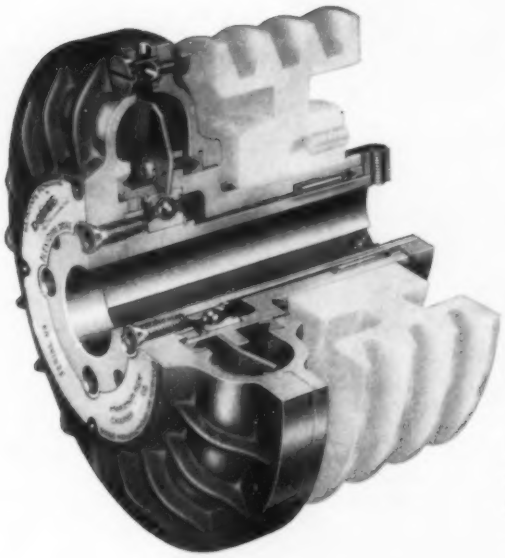
- ☑ Breakage of transmission parts due to instantaneous shock loads?
- ☑ Damage and recurring down-time from overloads?



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THE DRY FLUID DRIVE

It is no longer necessary to accept the destructiveness—the costliness—of conventional starting in the mechanical transmission of power. Flexidyne changes that!

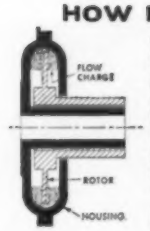
Flexidyne is the new way to start loads *smoothly*—to protect against shock and overload—to save power—all *without any sacrifice of efficiency at full load!*

This revolutionary development is ushering in "the day of the soft start"—which can mean thousands of dollars to you in equipment savings and in better, more economical operation.

Flexidyne is available, off the shelf, in Drives and Couplings. Capacities range from fractional to 1,000 hp. Ask your local Dodge Distributor or write us for technical bulletin.

DODGE MANUFACTURING CORPORATION, 900 Union St., Mishawaka, Ind.

HOW FLEXIDYNE WORKS



The "dry fluid" in Flexidyne is tiny heat-treated steel shot. A measured amount, called the "flow charge," is contained in the housing, which is keyed to the motor shaft. Inside the housing is a rotor, free to revolve relative to the housing, but connected to the load.

When the motor is started, centrifugal force throws the flow charge to the perimeter of the housing, packing it between the housing and the rotor, which transmits power to the load. Initial slippage is momentary. Housing and rotor become locked together and achieve full load speed without slip and at 100% efficiency.

CALL THE TRANSMISSIONEER—your local Dodge Distributor. Factory trained by Dodge, he can give you valuable help on new, cost-saving methods. Look under "Dodge Transmissioneer" in the *white* pages of your telephone directory, or in the yellow pages under "Power Transmission Machinery."

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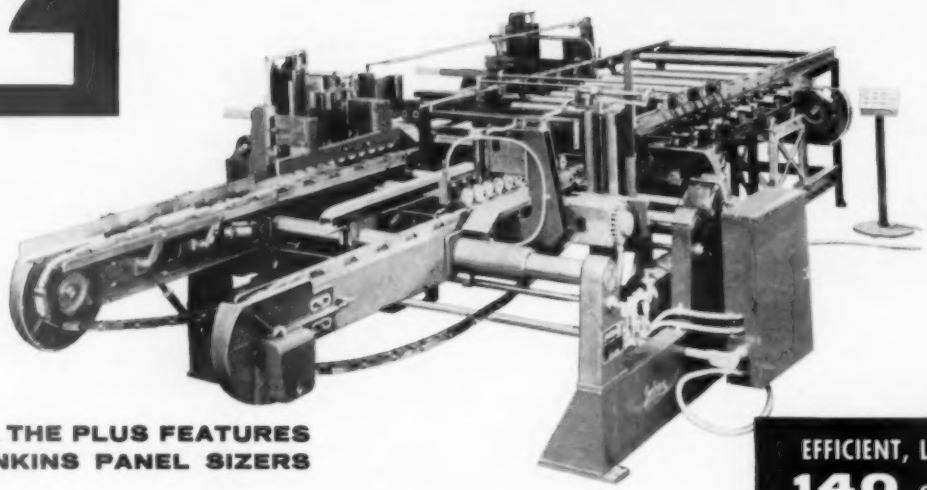
of Mishawaka, Ind.

2 Jenkins AUTOMATIC PANEL SIZERS



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- ✓ *Dual traverse gives maximum accuracy*
- ✓ *Warped panels stay flat under holddowns*
- ✓ *Smooth, accurate automatic transfer — no hoppering or extra handling*
- ✓ *Exclusive Jenkins Oilomatic feed chains*

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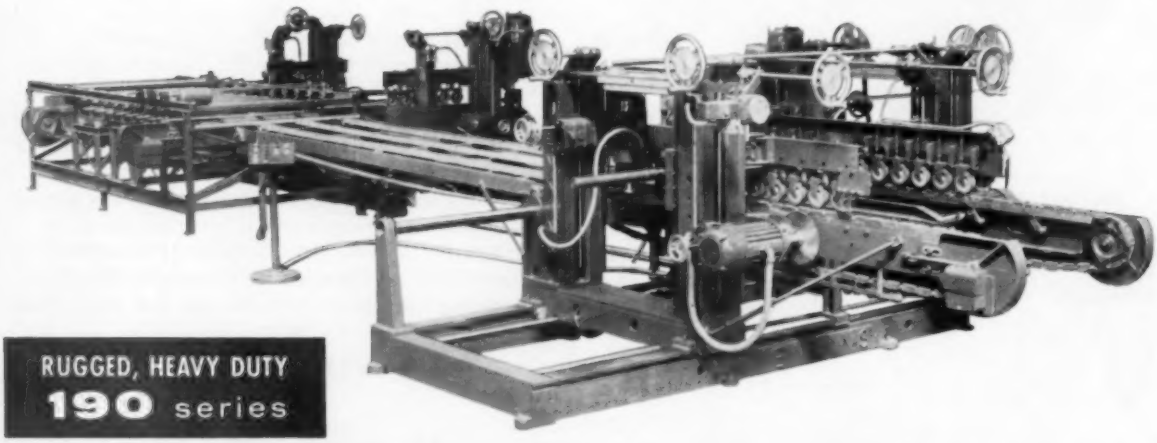
Jenkins 140 and 190 Series door and panel sizers are setting new production economy records every day. Why? Because nowhere else can you buy equipment that can compare with Jenkins — in speed, accuracy, versatility, ruggedness and genuinely advanced engineering. Don't wait — check the Jenkins facts today.



RUGGED, HEAVY DUTY 190 series

Modern Jenkins equipment can help you cut production costs. Write or call today.

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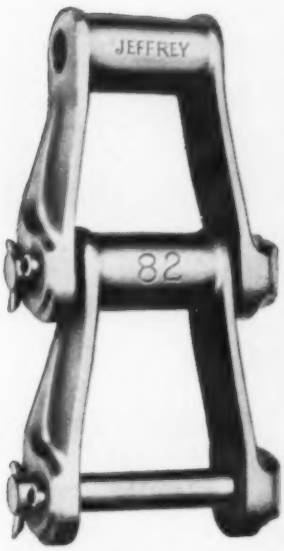
ENGINEERED AND BUILT BY KOHLER-JOA KJ CORP., SHEBOYGAN FALLS, WISCONSIN



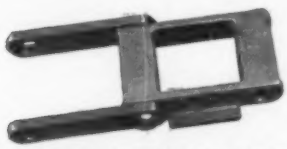
Type H Mill Chain – For increased speed and loads under clean or semi-gritty conditions.

Roller Top Chain – (Patented) Used on sorting conveyors.

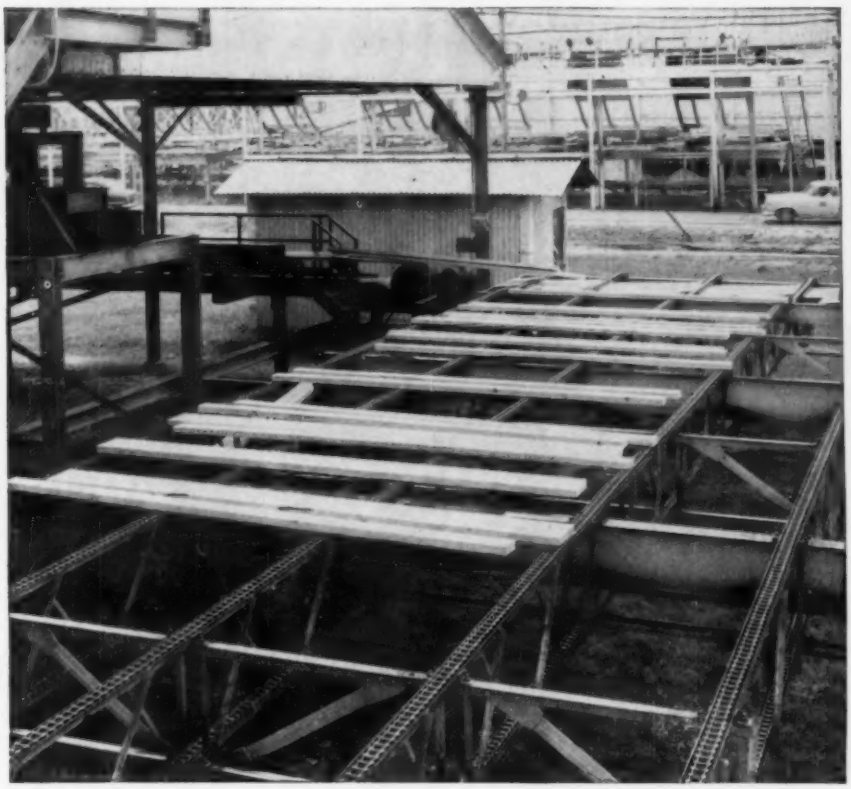
Detachable Link Chain – All-cast general service chain for lighter, slow speed operation.

Class 400 Pintle Chain – Works over same sprockets as above, but provides even greater durability.

Type C Refuse Chain–Broad sliding surfaces distribute wear over large area. Increase life.



Type PW-132 Combination Chain (Patented) Ruggedly constructed. Designed with extra large wearing surfaces.



For maximum service life, select JEFFREY CHAIN

Many types of Jeffrey chain are used in the lumber and woodworking industries; typical examples are shown here. All profit by Jeffrey's many years of experience in designing and making chain for maximum life and efficiency.

Your Jeffrey distributor can usually supply you from stock. See him for help in selecting chain or write The Jeffrey Manufacturing Company, 850 North Fourth Street, Columbus 16, Ohio.

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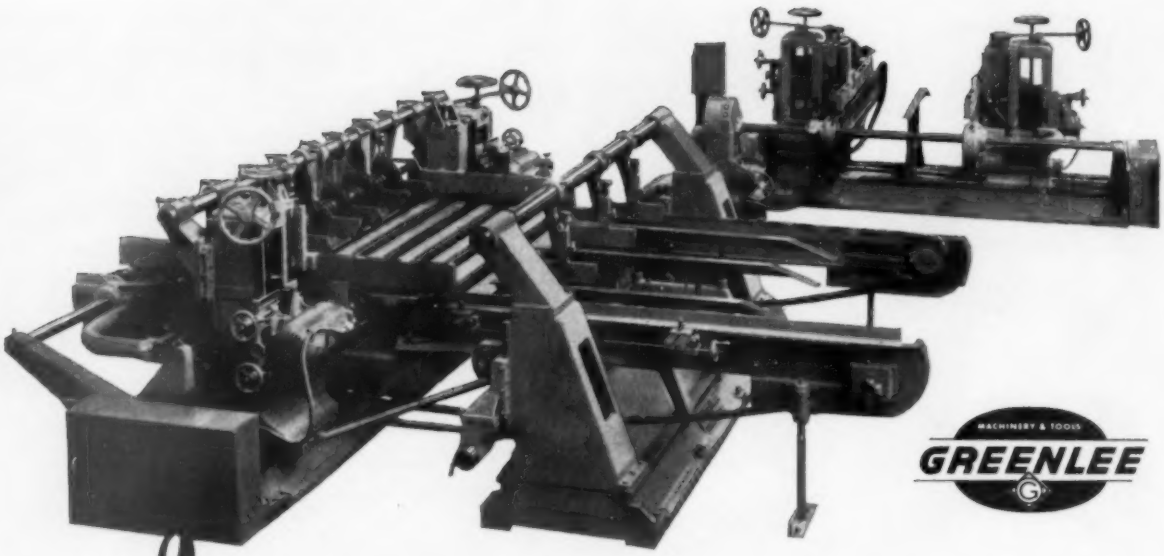

MACHINERY & TOOLS
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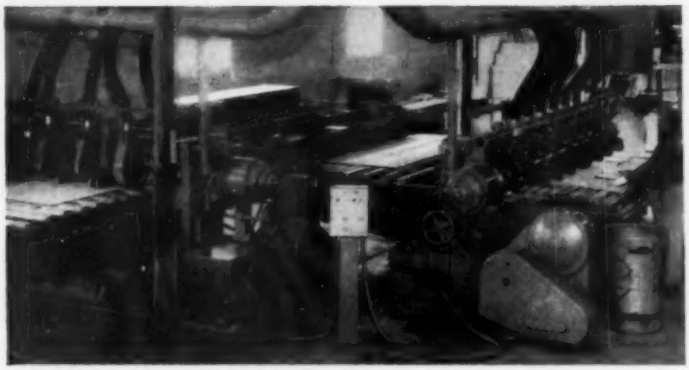
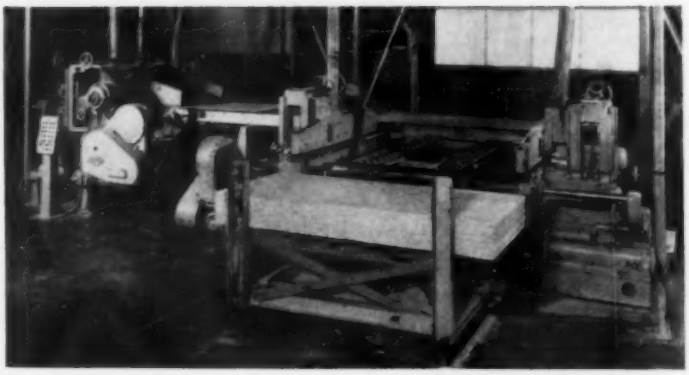
Improve production...lower costs with Greenlee Double-End Panel Machines

Special Panel Machines Size, Split, and Shiplap Insulation Board In One Pass. Edges are shiplapped on the Skinner. The second machine, with a slat-bed outfeed section, has a combination of front lower and rear top dado units that produce multiple strips with shiplap on all four edges.



Slat-Bed Multiple Cut-Up Saws Cut Flat and Curved Particle Board. Equipped with overhead dado cutting units these Slat-Bed Machines with automatic transfer cut both curved and flat particle board with minimum changeover. Feed rates to 110 feet per minute. Operation is fully automatic and accuracy is assured.



High Production Skinner and Cut-Off Saw Sizes Particle Board Panels. Equipped with horizontal hogging units, these machines are primarily used in high production panel sizing. The Skinner Saw has a cartridge type dado unit for panel splitting.

Many variations, in addition to those shown, can be arranged with or without automatic transfer units to meet your panel sizing, splitting, and grooving requirements. Discover how Greenlee Double-End Panel Machines can cut your costs!

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THE WHITE MOTOR COMPANY
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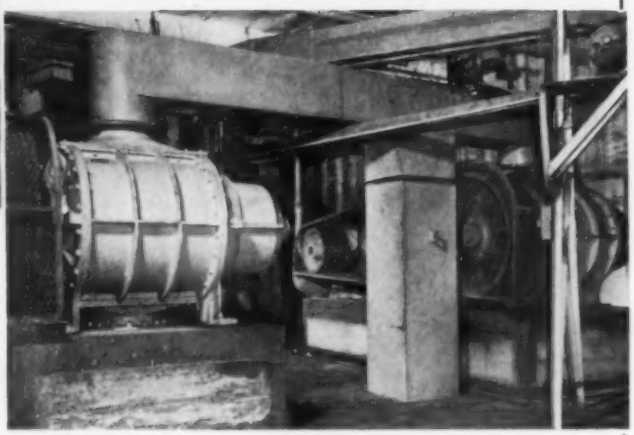
WHITE

415,000 tons

of chips delivered in 5½-year period!



Rader system at Pope & Talbot mill moves chips 4700 feet in one operation

High-quality pulping chips are an important by-product of the large Pope & Talbot lumber mill at St. Helens, Oregon. One mile to the southeast on the Columbia River is a ready-made customer for all the chips Pope & Talbot produces—the integrated pulp-and-paper mill of Crown-Zellerbach Corporation.

A high-capacity pneumatic conveyor system, installed by Rader Pneumatics in 1954, and put into operation in January, 1955, makes it possible for Pope & Talbot to move its entire output of chips all the way to the Crown-Zellerbach mill in a single 4700-foot "air lift." Since the system went into operation, approximately *415,000 tons of chips* have been delivered to the customer!

"The Rader system does the work of three or four large tractor-trailer combinations, at far less cost," says Harvey Hawkins, manager of the Pope & Talbot mill. "The system operates continuously, eight hours a day, when the mill is going. It carries chips away as fast as the chipper turns them out, so we have no storage problem. Both the band mill and the gang mill send their scraps to the chipper; as a result, there is virtually no waste."

Nor is there any "down time" on the Rader system. The only interruption came when plant expansion caused the pipe to be relocated, and the only pipe to be replaced was two sections which were damaged by a bulldozer. Even when 1000 feet of pipe was under three feet of water during a Columbia River flood, the system operated continuously during working hours at the mill.

PHOTOS: Upper left, conveyor pipe looking southeast toward Crown-Zellerbach mill, in background; camera is about 1000 feet down the pipe from the blowers. Lower right, twin blowers powered by 250-hp electric motors send air through "T" connection to conveyor pipe, located beneath floor.

Write for information on how Rader can meet your own requirements.

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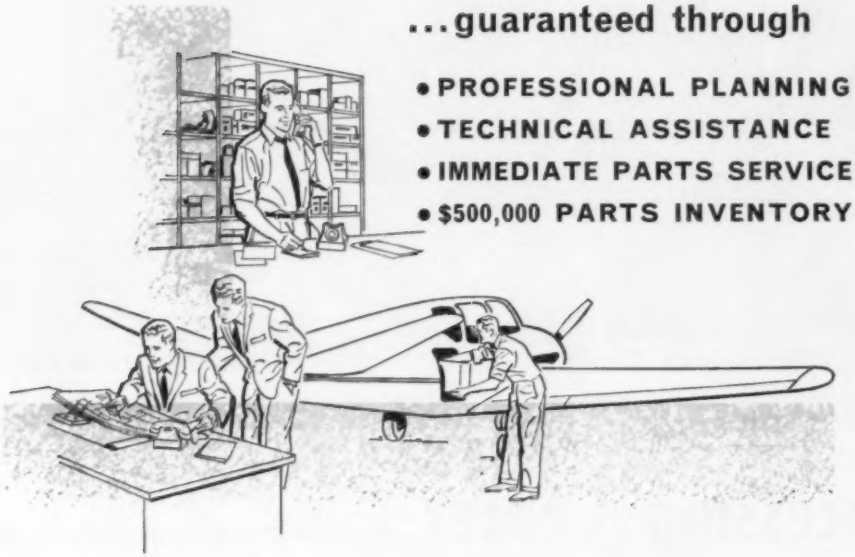

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Irvington's engineering service, for example, provides imaginative ideas based on sound principle and long experience to help you get top productivity from your equipment investment.

And the "smile" in Irvington SERVICE *stays* bright . . . today . . . tomorrow . . . and always.

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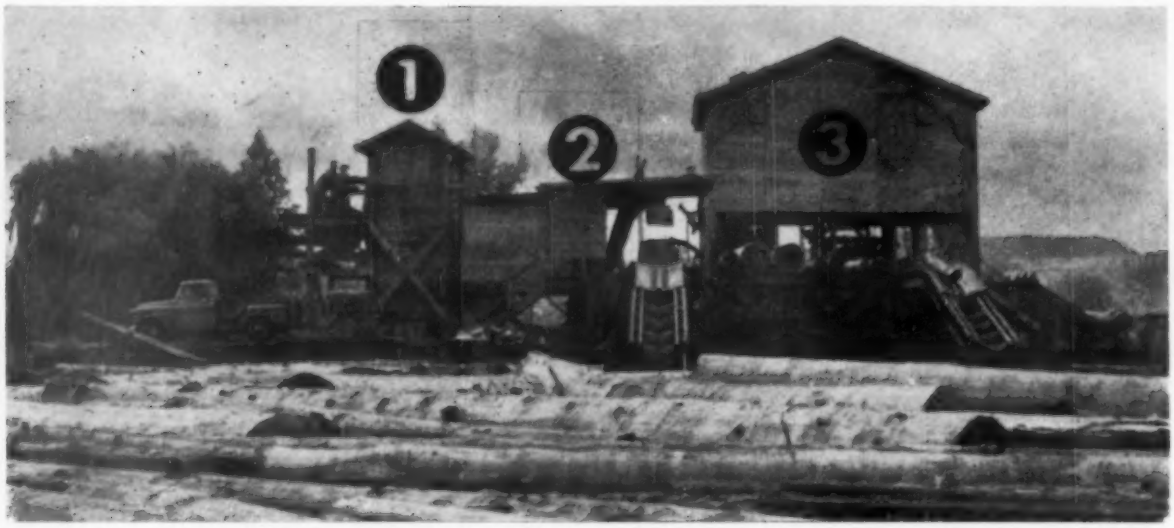


Outfeed side of barker installation shows: 1—bark surge bin; 2—deck saw; 3—barker. Barked sawlogs are in pond in foreground. Peeler blocks are kicked into pond pocket from offside of deck saw. Sawlogs go down rolls to pond.

Log Processing Center doubles chip output, lowers costs and

The Nicholson log processing center installed by the Giustina Brothers Lumber Co., Eugene, Ore., has resulted in real savings and upgrading of the firm's output, according to Nat Giustina, president of the pioneer western Oregon forest products company.

Roughly 45 million board feet of logs are processed through the center annually to serve both the firm's plywood plant and sawmill.

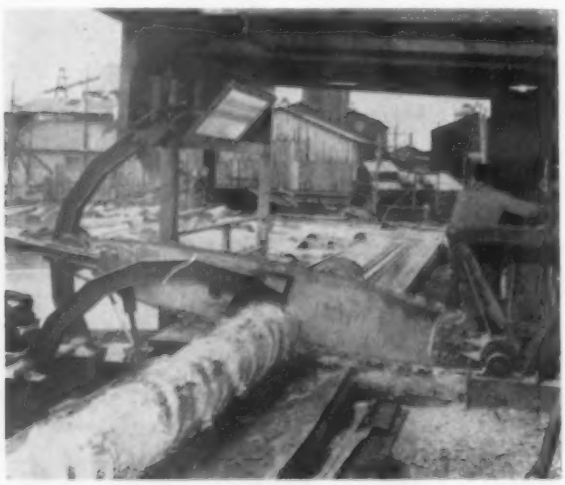
Before installation of the equipment, bark-free slabs were picked at the sawmill for conveying to the Sumner 72-inch chipper. Now, all the wood in the mill is bark-free.

Mr. Giustina says the installation has had the following effects on his operation:

- Doubled sawmill chip production in that nearly all wood is now chippable.
- Eliminated need for barker at veneer plant.
- Consolidated log handling, making three men available for other duties.
- Increased grade recovery in the sawmill through giving sawyer better look at the logs—how much better recovery is difficult to assess.
- Cleaner logs entering the mill have meant less mill cleanup.

Logs enter the system through a sidelift from the pond to a deck which serves the ring barker. A barkerman in a glassed-in control room controls both the barker deck and the barker.

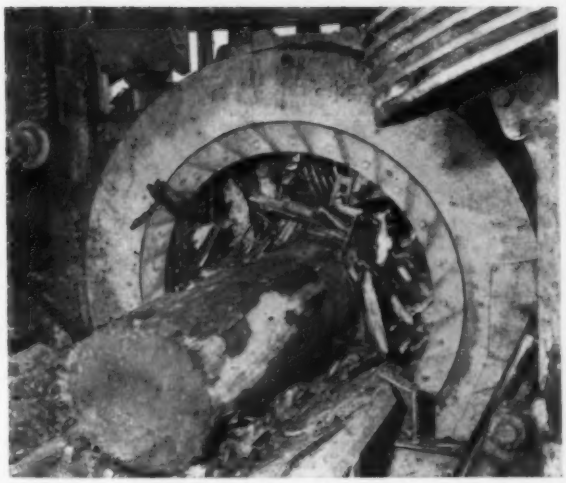
The plant operates on about 90% Douglas fir logs and about 10% hemlock, all of which is barked. The few cedar logs are passed directly through



Deck saw has hold downs for bucking, lifters underneath to eliminate saw pinch. Peeler blocks are kicked off just beyond saw. Mirror provides full view of log and operation.

Peeler block is scaled on saw deck. Note stop which holds block for scaler. It holds for scale while another log moves to saw. Water jets mark block lengths.

Sidelift brings logs out of pond up onto deck and rollcase feeding barker. Lugged chain under lift picks scrap out of pond and deposits it on chain feeding hog.



Infeed side of Nicholson 60-inch barker. The barker employs General Electric speed variator on drive. Nicholson designed and built machinery.

streamlines operation.

the barker without barking. Stringy cedar bark tends to plug the hog.

After barking, sawlogs can be directed down a rollcase back into the mill pond. Logs containing peeler blocks or sawlogs requiring bucking are transferred across to the decksaw.

Decksawyer operates his rollcase to spot the log for correct bucking. A series of water jets, spaced at trim-length intervals, aid him in correct spacing.

He bucks off any peeler blocks that may be contained in the log and cuts the balance of the log to sawmill lengths. The blocks are air-kicked into a pond pocket from where they are moved to the peeler block storage area of the pond.

Logs are scaled at the saw and, where sections are bucked—retagged. The company employs the log-tag system of log inventory. All logs are tagged. Recording of the tag numbers at the sawmill and veneer plant log deck simplifies inventory and recovery information.

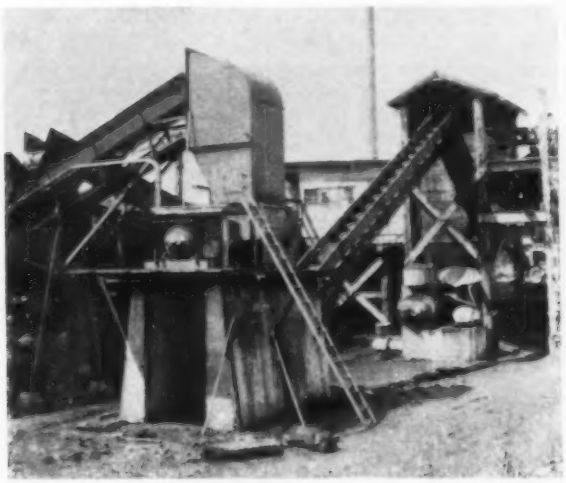
Bark from the barker is conveyed to a Jeffrey hammer hog which reduces it to hog fuel. From the hog, the fuel is conveyed to a surge bin serving a Rader Pneumatics high pressure blower system which blows the fuel 300 feet through a 12-inch pipe to the plant's fuel storage bin.

An "eddy current coupling" device fabricated by Controls and Communications, Eugene, Ore., controls the speed of the screw delivering fuel to the Rader feeder so that the unit is never overloaded.

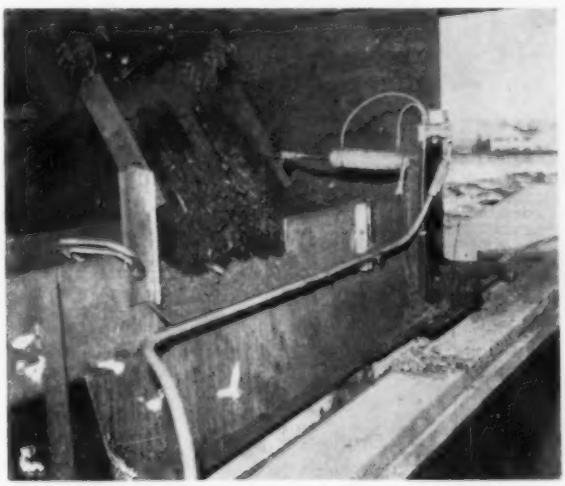
The Louis Allis Dynamatic drive on the screw takes its command from the power load on the Sutorbilt 16x26 blower. When the blower starts to bog down, the screw is automatically slowed. Infinitely variable, the screw drops from full speed down through a range extending as low as one-fourth speed.

A probe mounted in the feeder will stop the screw and sound an alarm if the feeder plugs. Another probe mounted in the surge bin warns the

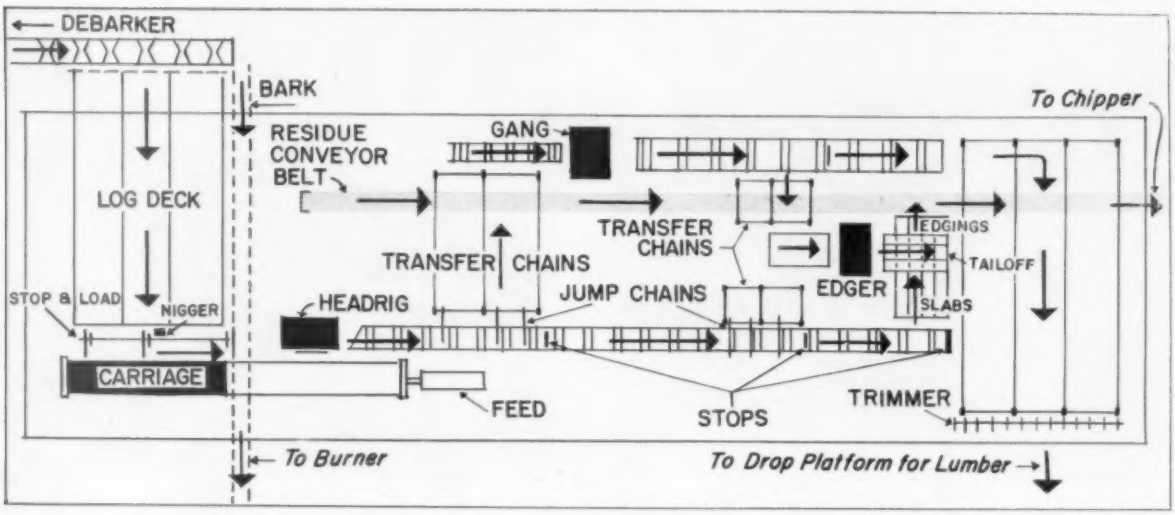
(Continued on page 64)



Bark disposal is handled by 35-ton-per-hour capacity Jeffrey hammer hog, center. Hogged bark is conveyed to surge bin, Sutorbilt blower, Rader blower system, right.



Flap over surge bin directs hogged bark to belt feeding Link-Belt shaker screen when feeding to truck. Otherwise bark drops into bin below.



New Mill Adds Profit for southern operator who cuts quality lumber products for sale in his retail operations.

In operation less than a year, the modern all-electric sawmill of the McClure Lumber Co. in the outskirts of Charlotte, N. C. has proved to be correct the philosophy of the company president, R. B. McClure, staunch advocate of quality lumber and a firm believer in combining manufacturing and retail operations. The new sawmill is located just four miles north of the company's planing mill and retail yard.

Dealer needs mill. "The competitive market makes it necessary for a lumber yard to operate its own sawmill if it expects to handle any volume of lumber in its business," McClure says. "Also," he adds, "a lumber dealer needs a stationary mill of his own to realize more profit from his waste."

The mill is operating a shift and a half and expects to cut 30,000 to 35,000 feet in nine hours. The mill is also producing 7 to 8 carloads of chips a week. Chips go to the Bowaters Carolina Corp. at Catawba, S. C., and Riegel Paper Corp., Acme, N. C.

All of the units of the new plant, sawmill, debarker, derrick, chipper, and office were constructed or installed within five months. Ralph McClure of Charlotte was the general contractor. D. E. George, Marion, S. C., millwright, installed the equipment, and E. L. Edwards, formerly McClure retail yard purchasing agent and now manager of the new mill, was overall supervisor.

Framework of the main mill building, which measures 40x169 feet, is structural steel. The roof is a combination of plywood sheathing and five V aluminum with aluminum foil laid over plywood sheathing and ¾x2½-inch strips laid vertically between to create a draft and discharge hot air. An 8-foot fan in one end of the building also helps cool the mill. Built to fit the natural contour of the land, the mill is one story in front—two in back, on the downhill side.

The McClure Lumber Co. handles the mill's entire output through its own retail yard, which sells about 8 million board feet annually in the Charlotte area.

Logs for the mill come from stumpage purchases and are cut and hauled by two independent contractors.

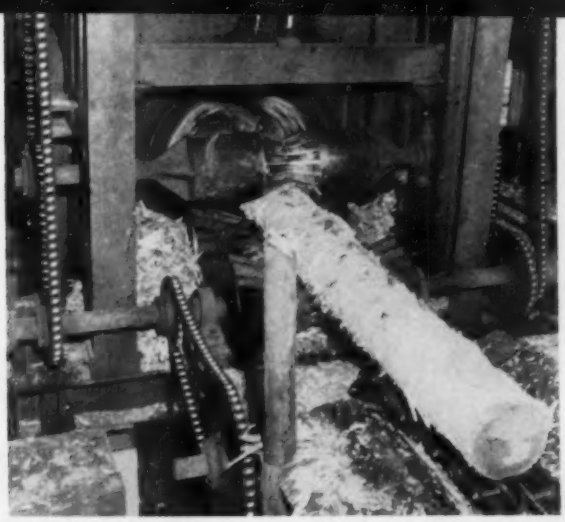
The McClure Lumber Co. started in 1933 with two small sawmills and a planer. Fire destroyed the operation in 1937 and a new mill, planer, and retail yard were rebuilt on the site. The yard moved to its present location in 1947 and has since been expanded several times.

In addition to manufacturing and selling lumber, the company operates a millwork shop and handles a full line of building materials and supplies.

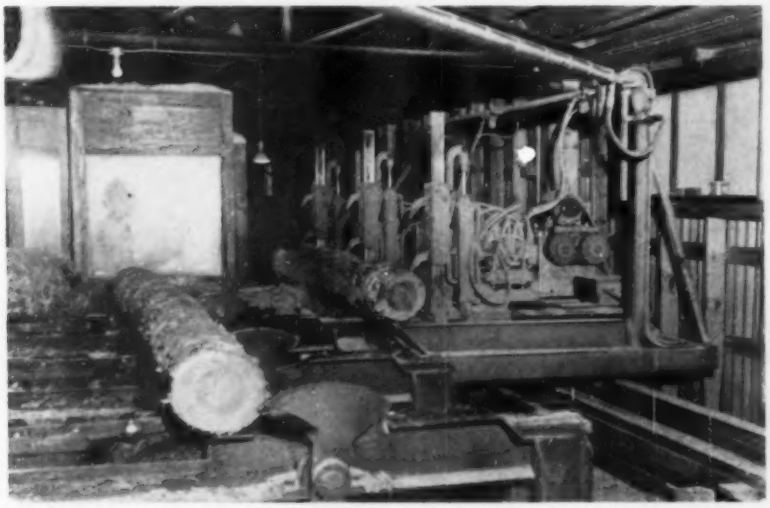
Equipment. C. M. & E. Norman 50-inch chipper; Link-Belt chip screen, Dependable Blowpipe Co. 50-inch incinerator; Salem "Pine Special" 4-block, 16-foot carriage, sawyer-controlled; Anderegg hydraulic feedworks; Dominion-Premier 25-inch gang; Wheland 4-saw edger; Salem automatic 10-saw trimmer; Westinghouse motors—100-hp on gang saw, 150-hp on 54-inch circular head saw and feedworks; B. L. Montague chip blower; Mullis debarker; Terry derrick; Armstrong filing equipment; Century motor—30-hp on chip blower and car spotter.

4 Cants that have had slabs and grade cut off two sides at headrig move to Dominion Premier gang. The double crank gang is powered by a 100-hp motor.

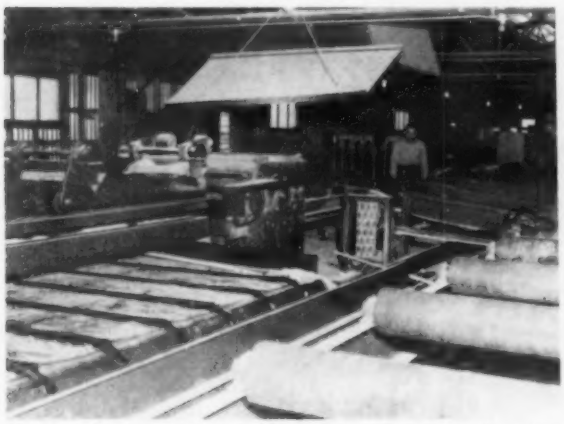
1 Terry derrick unloads trucks and handles logs from pile to deck. Unit operates on electric power. Spar is 118 feet long and has an 84-foot boom.



2 Debarked log emerges from Mullis 26-inch "Log Skinner." This unit is located at the ground level end of the split-level sawmill.

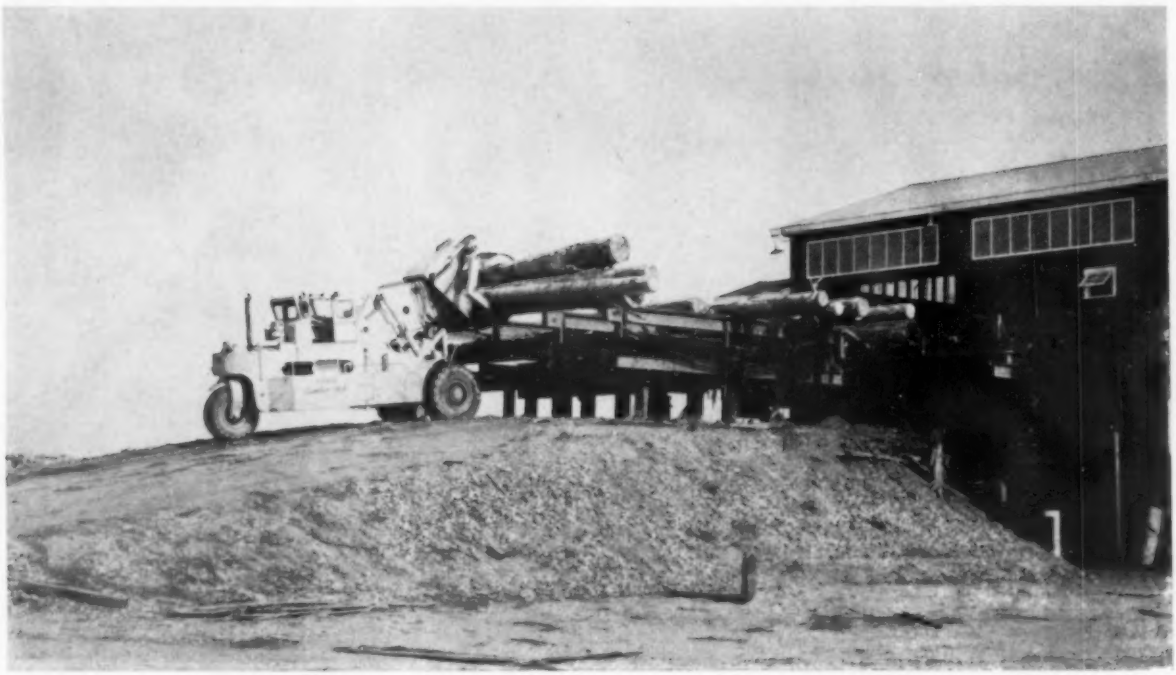


3 Salem carriage is a 16-foot, 4-block "Pine Special." It is propelled by an Anderegg hydraulic shotgun drive. Air and power lines are carried by panagraph. The carriage is sawyer-controlled with Salem Set controls, shown in more detail at right. Logs are sawed for grades and cants, then go to a 25-inch gang.



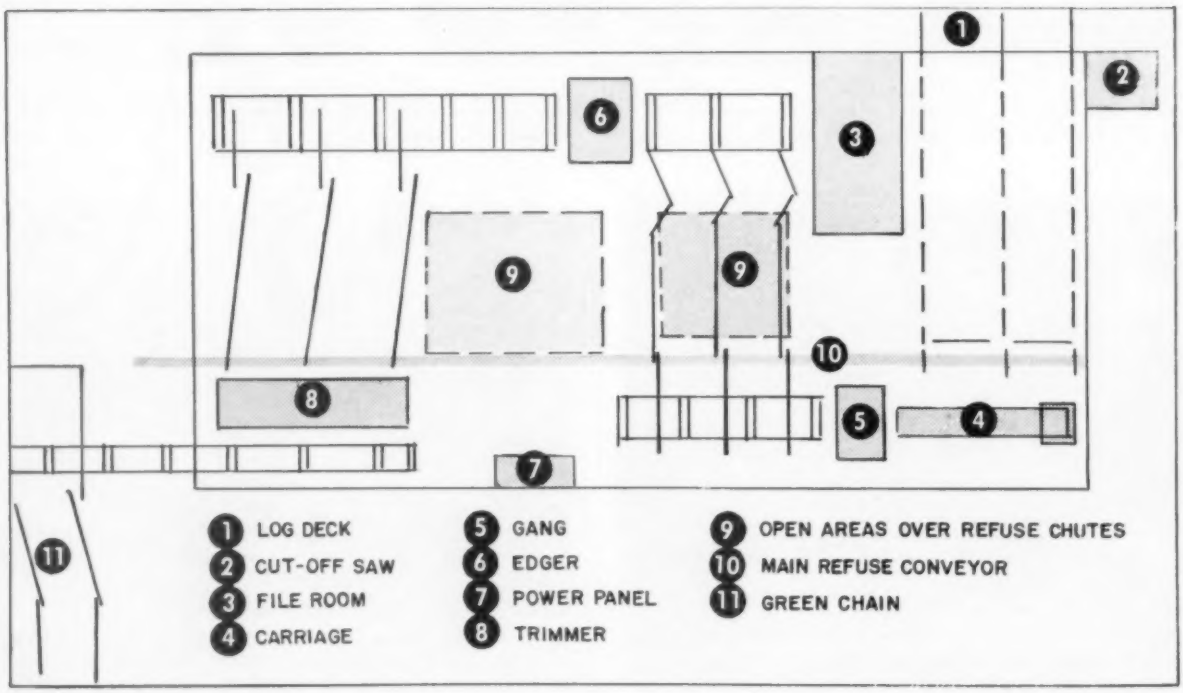
5 Material is edged on Wheland 4-saw edger. The edger is equipped with shadow line lights and also has a company-made automatic tailoff.

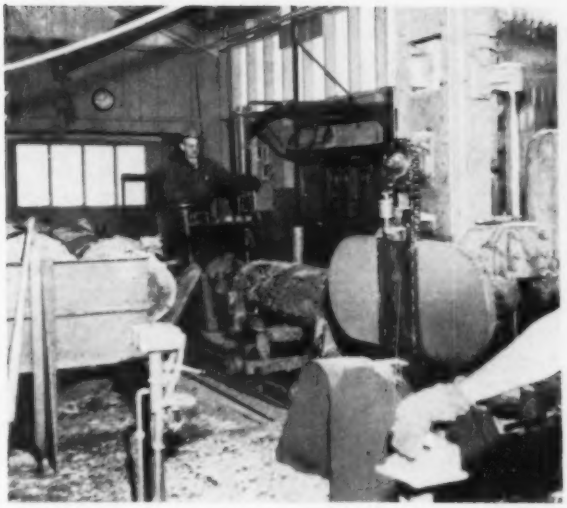
6 Boards can come directly from gang or edger to this Salem 10-saw automatic trimmer. Operator in background has a push-button control. ■■



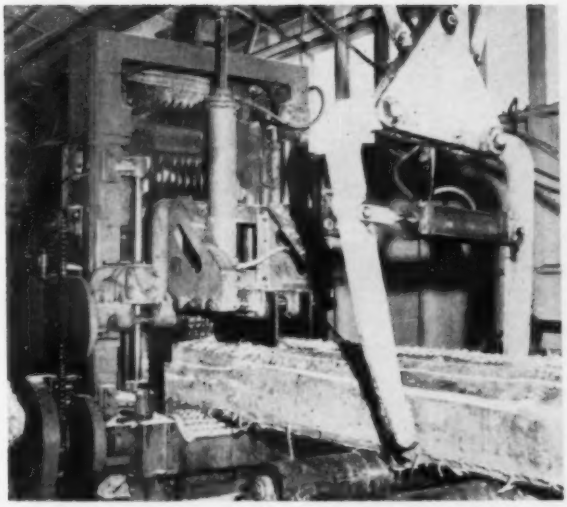
Union Lumber Co., Ft. Bragg, Calif., now handles in this new gang mill small logs formerly sawed in the company's big mill and sometimes sold to outside mills. These logs now are being processed more economically, and additional logs of this type are also being sent to the mill from a re-log operation begun in 1959. The Wagner Lumber Jack here is delivering typical logs to the mill. The Lumber Jack unloads trucks, decks, undecks, and feeds the mill.

New Small Log Gang Mill in Redwood Region



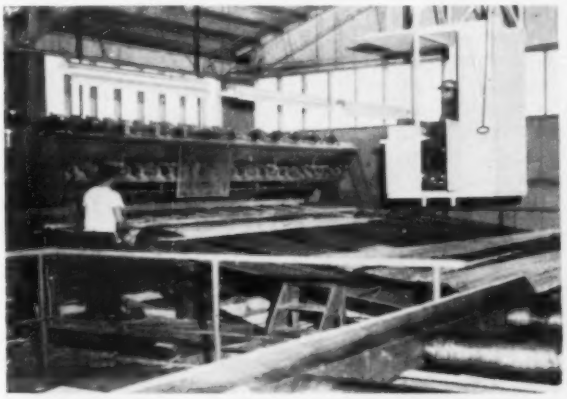


Mill cuts approximately 16 million feet a year, handling logs up to 27″ in diameter. A typical 20′ log is put through the Sumbo gang in about one minute. Both Douglas fir and redwood are sawed. The mill employs 16 men, on one shift.



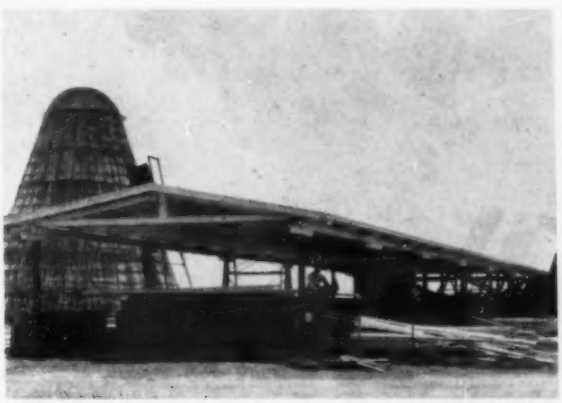
Key unit in the new plant is this Super Sunbo, 30″x32″, by Mill Engineering & Supply Co. The mill is manufacturing random length lumber 2″x3″ to 2″x12″. Clamp takes over as boards emerge, holds until they reach edger transfer.

Stub edger is a Klamath Machine & Locomotive Works, Inc. unit with power shift for settings. It is fitted with four saws and has a 6″x42″ opening.

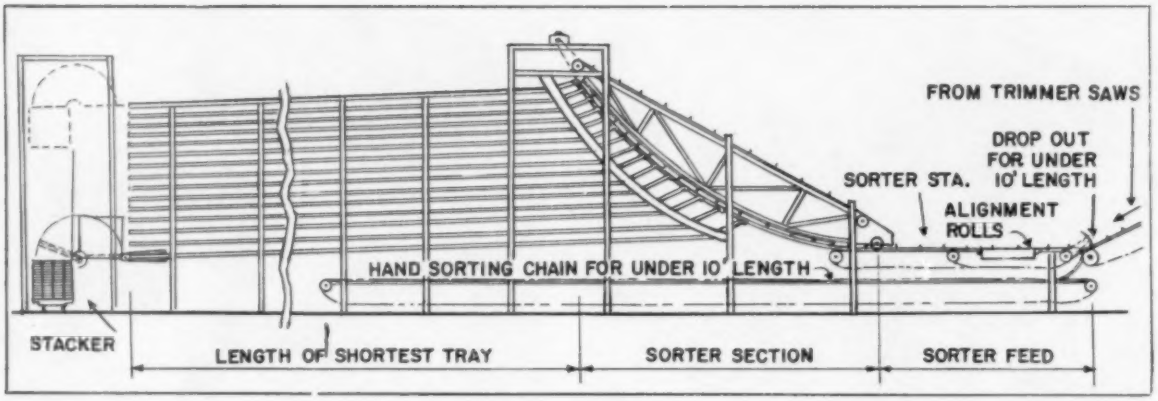


Overhead trimmer is also by Klamath Machine & Locomotive Works. It's an air-operated 24′ unit with 13 saws. All fir and some redwood is surfaced and shipped green

Typical logs at the new mill. Cut off saw here is LM unit with 50″ bar. Mill is situated in a new area, with plenty of room for decking and expansion.



Two pullers and a grader puller are on the 150′ green chain. New mill is simple, compact, clean and efficient. ■■



Automatic Lumber Sorter with memory system reduces manpower requirements, speeds sorting and saves green end space.

Production Systems, Inc. developed the automatic lumber sorter pictured on these pages following a survey of the lumber industry in which operators of larger sawmills were asked: "Would you be interested in equipment to sort lumber automatically?"

94% of the respondents said yes. Mills in all parts of the country responded, averaging $10,500 as the amount they would consider spending per man saved by automatic lumber sorting.

A prototype unit was built with the sole objective of being able to observe and analyze the functioning of each component part. The unit measures about 10 feet wide, 35 feet long and 10 feet high. Random lengths and dimensions of lumber are fed into the sorter by a chain conveyor, pass by a one-man control stand, where the memory control is directed, and are automatically segregated into five different trays. In an actual mill installation, operation of the machine can be readily adapted to lumber of any desired minimum or maximum length, dimension or number of different sorts.

Savings in manpower. The sorter can replace almost as many men as the number of sorts it performs. Most mills require from 5 to 15 green chain pullers plus additional men in the yard to handle and store lumber.

Production System's unit with its magnetic memory system handles the entire sorting function for length, thickness and width automatically by limit switches. Automatic sensing can also be set up for sorting by moisture content.

The system will take care of the entire green chain sorting function by push-button operation, requiring one or two men.

Saving in space. Because the automatic lumber sorter makes maximum use of vertical space to sort lumber into trays or pockets, one above the other, substantial space savings are made in green chain length as well as the space along the sides of the green chain and the yard area surrounding it required for handling and storage of lumber.

As a rule of thumb, Production Systems engineers estimate that the automatic sorter can perform the sorting function in about one-third of the space presently occupied by the green chain.

Speed of sorting. With the automatic lumber sorter, the average operator working under average conditions can sort lumber at a rate of about 45 boards per minute. With two console operators, a sorting rate of about 70 boards per minute is possible. Maximum number of sorts per tray system is about 30.

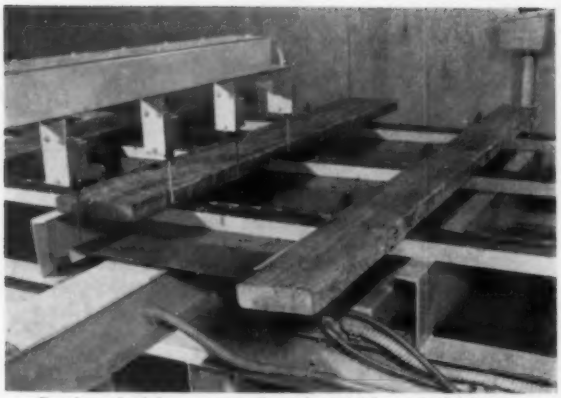
Flexibility of expansion. Once in operation, the automatic lumber sorter is easily expanded by extending length of the bridge chain and adding more trays at the top of the tray system structure.

Sorting chain essentially consists of a series of parallel chains upon which lumber is carried behind standard lugs. Number of chains may vary from three to five, depending upon length of lumber involved. These chains are driven by sprockets on a common shaft and are synchronized with the bridge chain.

Brain of the system is the Magnestat magnetic memory system built by Republic Electric & Development Co., Seattle, Wash. The memory system is operated by a 110-volt current and is electric and magnetic in principle, completely free of any sensitive electronic components. It records impression from limit switches or from the console operator, passes them along in the system to automatically carry out the sorting procedure.

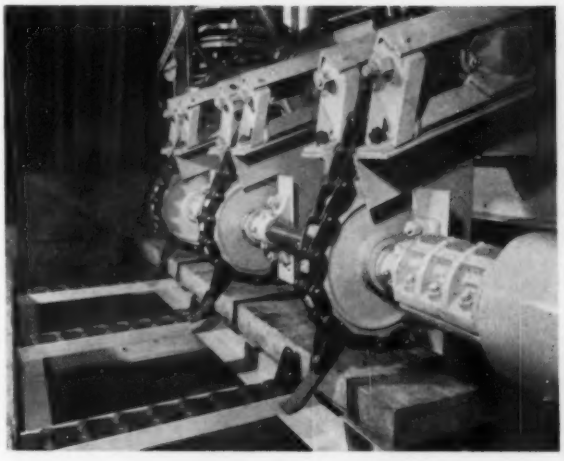
Unloading of lumber, once it has been placed in the proper tray, can be by selective tipple, directly into an automatic stacker, as indicated in sketch above, or onto separate conveyors for subsequent processing, storage or shipment.

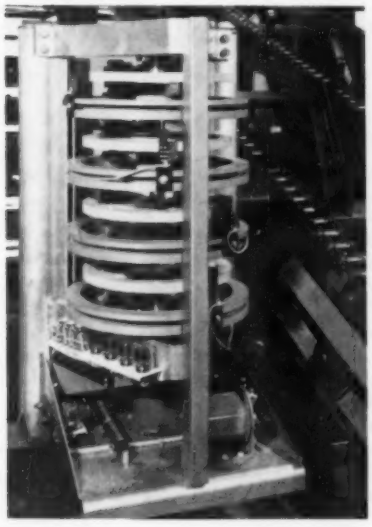
Production Systems, Inc., is a new firm in Seattle which resulted from a merger of Tracey, Cooks, Brunstrum and Dudley, engineers who designed the sorter, and Puget Sound Fabricators, Inc., which is a steel fabrication firm.



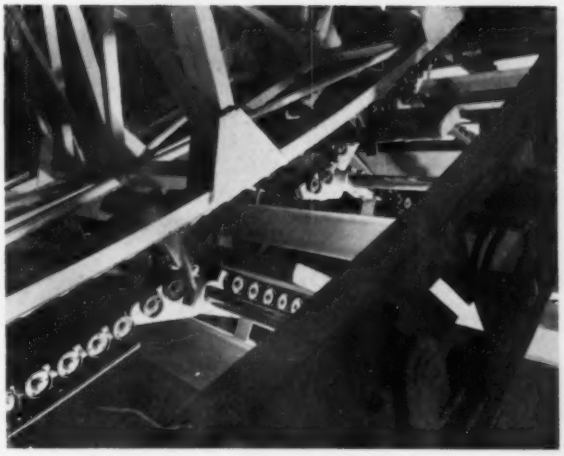
1 Sorting decisions as to length, width and thickness are automatically made by sensing fingers of limit switches as board pass through "decision area." This information is recorded on the magnetic memory system. Pushbutton console at right is for visual decisions.

2 Visual functions, such as grade or species, must be decided by operator at push-button console. When he commits his decision to the button, it is recorded as a magnetic impression on one of the memory discs in the background. The memory discs, shown closeup below, are synchronized in speed with the speed of the green chain. After the board has been deposited in its proper tray, information on the disc is erased and it is ready for the next sorting decision.





3 This board has passed the "decision area" on the sorting chain and is ready to be picked up by the bridge chain. Pusher lugs of the bridge chain, synchronized with lugs of the sorting chain, convey the boards upwards until the pre-determined gate is reached.



4 At the pre-determined sorting gate a solenoid-controlled air cylinder (arrow), activated by an impulse from the magnetic memory disc, drops the gate mechanism, channeling the board into its proper sorting tray. In this view the lowest board on the bridge chain is entering an open sorting gate, feeding it onto gravity roller incline which will carry it to the end of the sorting track. Boards traveling up the bridge will be directed into pre-determined trays by additional solenoid-controlled air cylinders mounted along the side of the bridge chain. ■■

Tons of sawdust were dozed to grade and compacted on the freeway and the preliminary test sections by a John Deere tractor.

Six steps of methods are illustrated in sketch from Foundation of Canada Engineering Corp., Ltd. Engineers predict that a slight "waviness" will eventually develop which may be detected by the more sensitive driver.

Illustrations courtesy CONSTRUCTION WORLD, heavy construction journal published by MILLER FREEMAN PUBLICATIONS.

Sawdust Blanket Floats Highway over peat bog and

opens way to new use of mill residues and allows economies in highway construction.

Sawdust, placed and compacted to form a blanket from 2½ to 15 feet thick, carries the regular courses and pavement of a 3¼-mile stretch of highway in Canada which crosses an 80-foot deep swamp. The surcharge causes the sawdust to become submerged permanently under the water table of the peat. This, plus the fact that cedar sawdust was used, assures that the blanket will last as long as the road surface.

The technique was developed for a section of the Port Mann Freeway, outside Vancouver, B. C., by the Foundation of Canada Engineering Corp., Ltd. Extensive tests indicated that the technique was both practical and economical.

Floating the highway over the peat and soft clay was awarded to John Laing & Son (Canada) Ltd. Laing crews spread the 300,000 cubic yards of sawdust with light dozers. The peat was too soft in many places to support trucks. Dozers compacted the sawdust as it was placed, creating a much more stable working platform which actually floated on the mire.

Novel techniques were applied to speed consolidation of the layers of peat and soft clay.

Sand drains—actually columns of sand driven through the sawdust, peat and clay—were installed to speed consolidation and to allow drainage of the mire, rather than complete displacement. The sand drains will allow the soil matrix to compress under the sawdust, permitting only water to escape upward onto the road grade. Surcharge must still be applied slowly to avoid horizontal displacement.

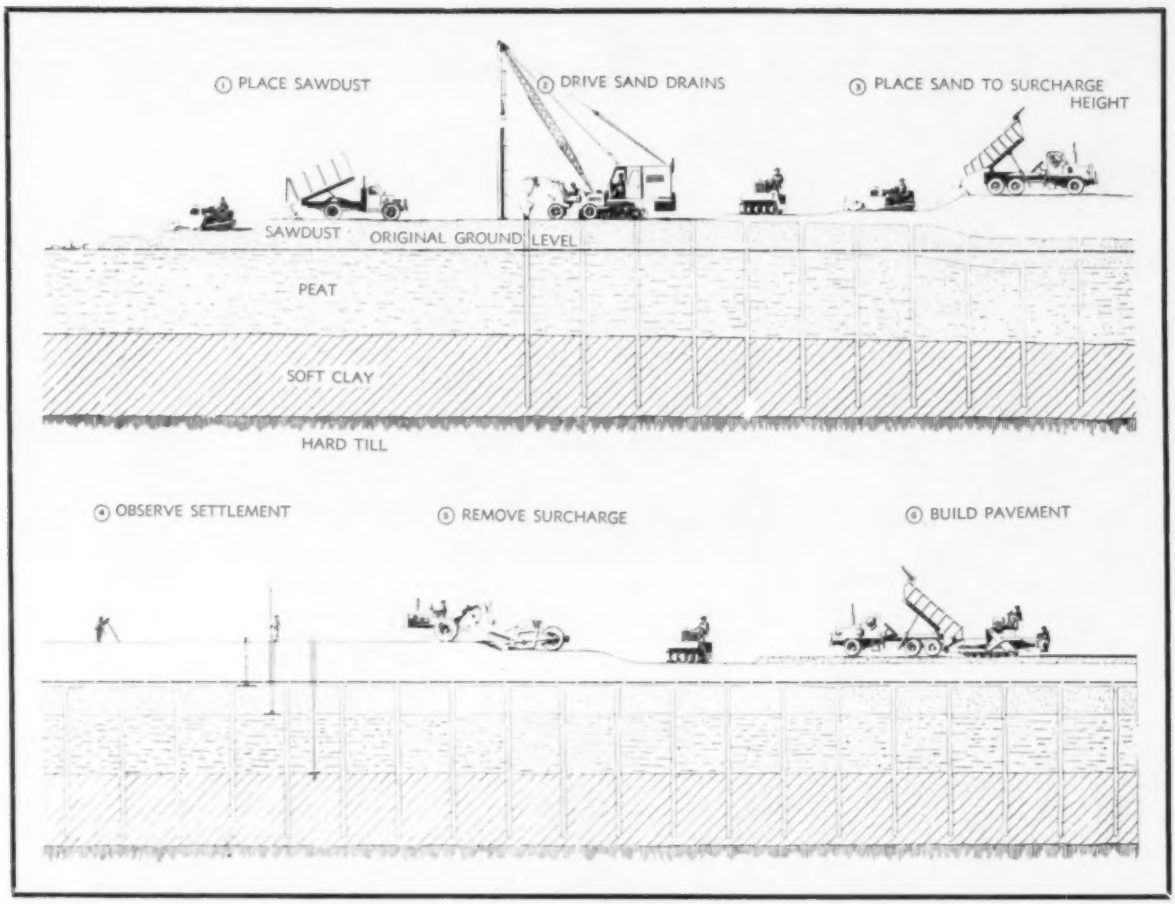
Embankment fill which embodies the surcharge and the permanent roadway base consists solely of sand. About eight feet of this fill will gradually be placed on the sawdust blanket, but only three feet will remain permanently in place. The remaining 5-foot surcharge will be shaved off when the desired degree of settlement has been achieved.

Lack of experience with this method of construction prevents an accurate prediction of the time when the surcharge can be removed, but it is estimated that the pre-engineered degree of consolidation will be reached in between six months and a year. Then the regular pavement will be laid.

Deep settlement plates between the sawdust and the peat, and regular levels and transits are used for settlement observations, in addition to piezometers which are used to observe water pressure in underlying materials.

This instrumentation makes it possible to build up the surcharge at the correct time interval.

Bright future. Fenco engineers expect that this new road building technique will find broader applications since "it makes it possible, at reasonable costs to build in swampy locations which previously would have been considered impractical to treat. And it uses a material—sawdust—which is often wasted.



Road engineers in Canada have solved similar swamp problems on other stretches of the Port Mann Freeway by controlled settlement using sand surcharges without sawdust. But these swamps were not as deep, running 3 to 30 feet.

But, even with controlled settlement, the use of sand alone at the sawdust blanket area would have called for prohibitively deep fills, and perhaps only complete displacement would have been practical.

This new use of sawdust has particularly raised the spirits of the Western Red Cedar Lumber Association which says "The tree is getting back into transportation. When wheels of wood were replaced by steel and then rubber, who would have guessed that wood would ever become an important transportation factor again?"

The association calls attention to the long life of cedar, pointing out that it develops natural oils and resins that inhibit decay and attack from insects. This grown-in durability, combined with the fact that the sawdust blanket is ultimately driven below the water table will guarantee Canadian motorists a foundation that will last at least as long as the smooth surface on which they drive.

The association says the new technique will certainly find other applications. "With the cost of modern highway construction so awe inspiring today, it looks like cedar sawdust—often a waste product—has come to the rescue."

Sand drain mandrels were installed by a Bay City crane. They were driven to depths up to 60 feet. An auger has to be used to drill through the sawdust blanket. ■■

Pickering's New Plant at Standard, Calif., aims for monthly output of 5 million square feet of white fir plywood sheathing.

Four years of market and timber resource study preceded the decision to build this new utilization facility at Stanford, reports Pickering Lumber Corp.'s president and general manager Frank F. Momyer.

In exploring the possibilities of building a plywood plant and in reaching the decision to go ahead, Pickering was affected by the major factors which have affected similar other mills in the West: the necessity and the advantage of doing an increasingly better job of log utilization, and the important mechanical capability of being able to peel logs when plywood sales are good or to saw lumber when that item is in a favored position.

The production goal of the new plant is approximately 5MM square feet a month, 3/8" basis. However, the company is taking time to carefully smooth out the operation and to steadily upgrade efficiency.

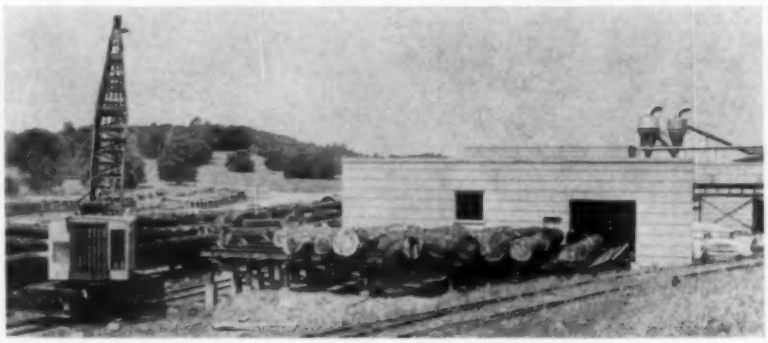
"Our production here is pretty much a standard plywood operation," says plant superintendent Dewey Clay, "but the plant is interesting in that we have here, under one roof, just about all of the newest in plywood manufacturing equipment.

The plant is not unique, but is unusual among many plywood plants erected in recent years; the building is of all-wood construction. The standard plant has approximately three acres under roof. Glu-lam beams by Timber Structures, Inc., Portland, Ore., span 40 feet in some places, 63 feet in others. The exterior of the plant is Crezon overlaid plywood applied to resemble siding. To achieve this effect, panels were cut to 2 feet by 8 feet. The sides of the building are uncluttered. Downspouts which take care of roof drainage are on the inner walls of the building, emptying to the outside just above ground level.

Log handling at Standard differs somewhat from that at many other plywood plants. Pickering's logs come from the woods by train. A single Orton rail crane is used to feed the plywood plant and to do all the decking for the mill.

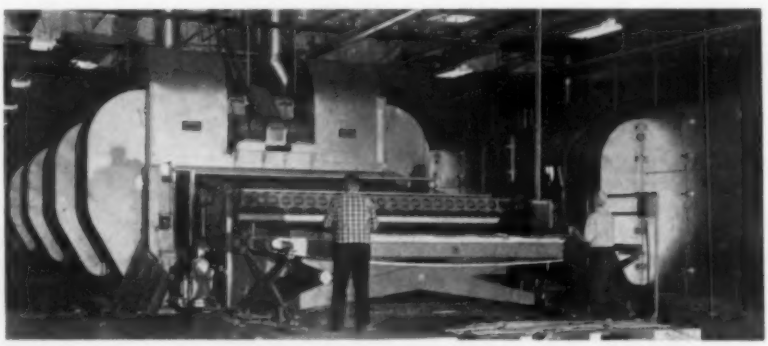
Plywood and sawmill logs are not segregated in the woods, though this may someday be done. The crane re-

(Continued on page 46)



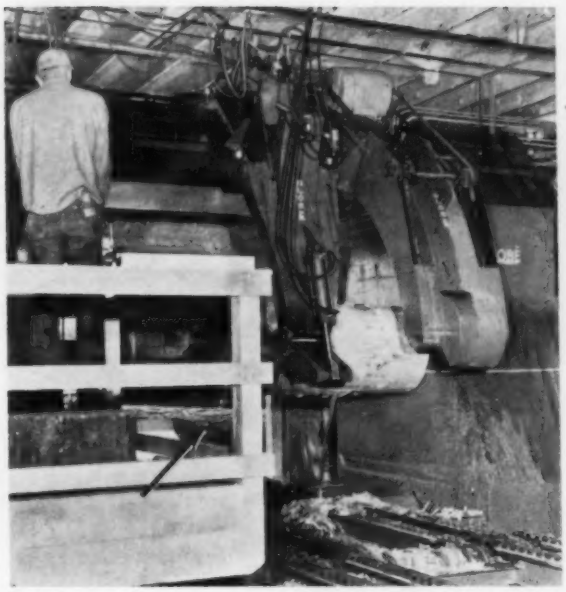
1 Live deck at barker building is big and holds generous supply of logs for bucking. Square window in the building is a fixed, oversized one which allows plenty of light at barker operator's control pedestal.

4 Orton rail crane is picking peeled blocks from haul chain and building deck on concrete slab, right middleground. Arrow indicates break in haul chain where corset rolls are installed. For night operation, this is where fork lift deposits peelers taken from small storage deck.



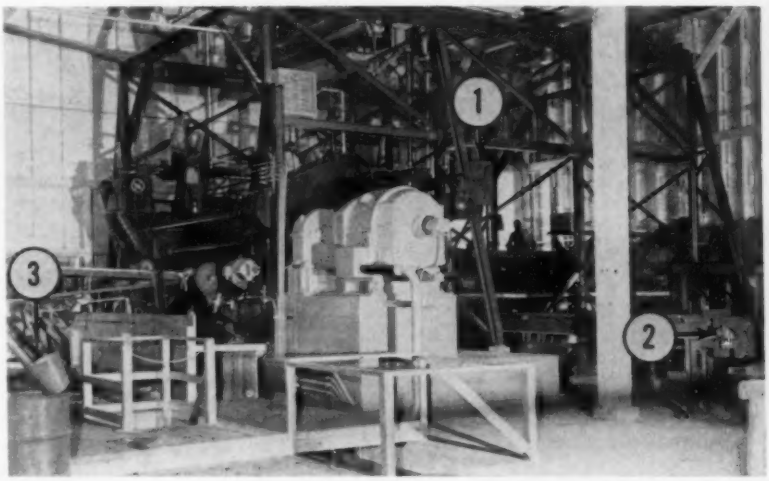
6 Moore dryers are, at left, a 6-line, 22-section one end, at right, 6-line, 18-section. Jeddeloh Sweed veneer feeders serve both units. There is room for a third dryer to the right of the pictured units.

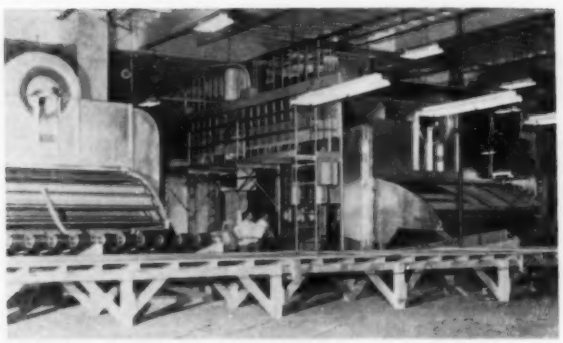
2 Sawyer operating L-M cutoff saw is positioned almost directly in line with barker. Main refuse conveyor passes just along his right side, to burner.



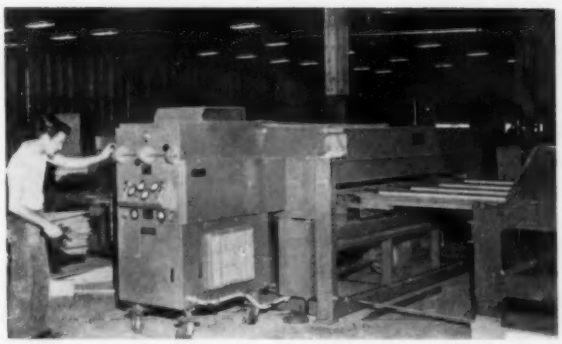
3 This view shows relationship between barker operator's position and Globe barker. Unbarked log (arrow) is on rail car and is destined for mill deck.

5 This steel superstructure supports the Ederer hydraulic charger for the Coe lathe. Target light helps speed positioning of blocks. Mirror (1) reflects light on near side. Redco tipple serves six trays. Cores, currently being sold to a local small operator, move outside on their own small conveyor (2) Refuse from lathe moves upward and outside (3) and through barker building to burner. Grinding room is just left of the camera range.

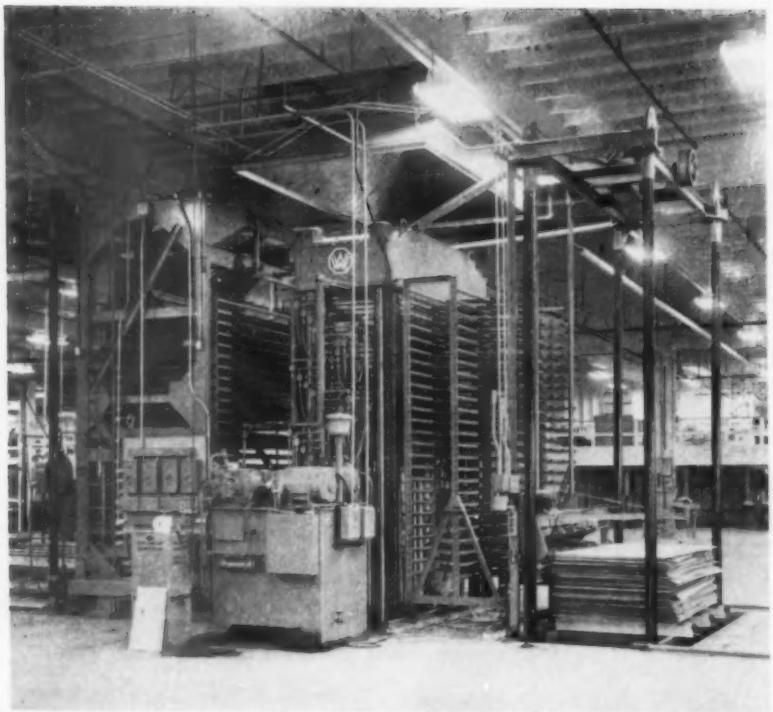




7 View of the outfeed end of the dryers shows location of the instrument control and recording panels. Raimann patch line extends back from the camera position.



8 Mann-Russell electronic edge gluer is Model 200. It is served by Globe traveling head jointer. Belt sander is at far left, Raimann patch machines in back corner.

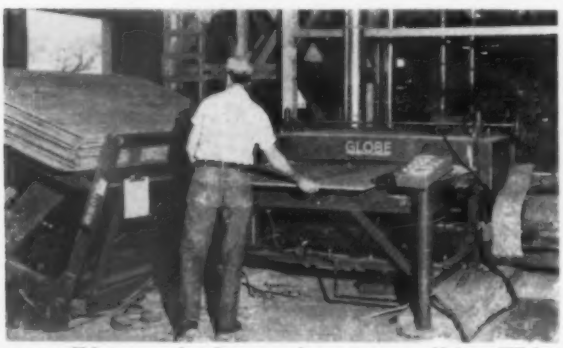


9 Williams-White 24-opening hot press is flanked by its American Manufacturing Co. loader and unloader. There is room for a second press. Glue mixing room is in right background and behind it are green veneer trays.

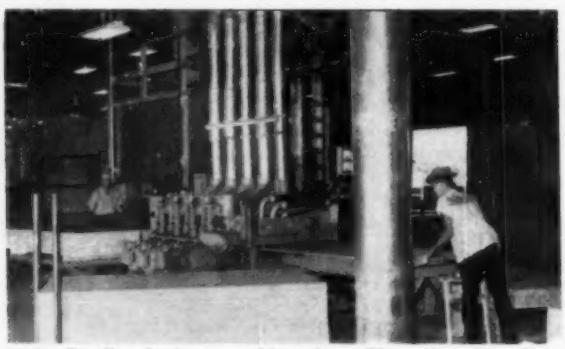
moves the peelers as the rail cars are successively spotted opposite the barker building, which is completely separate from the main plant.

The crane places logs on the barker live deck, for bucking inside the building. As the peeled blocks emerge, some go directly to the lathe and some are removed from the haul chain and are decked opposite the building. Decked blocks are peeled by the night crew.

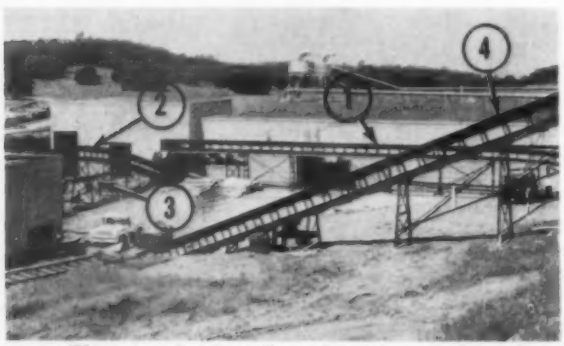
Equipment. L-M deck saw; GLOBE 8-foot barker; EDERER hydraulic lathe charger; COE 8-foot lathe; REDCO Upple; MOORE veneer dryers; LAUCKS Sentry moisture detector; RAIMANN patchers; GLOBE belt sander; MANN-RUSSELL 200 edge gluer; YATES-AMERICAN S800 drum sander; GLOBE traveling head jointer; AMERICAN MANUFACTURING CO., lifts and hot press loader and unloader; WILLIAMS-WHITE 24-opening hot press; GLOBE glue spreaders; SWEED dryer feeders, core saw; CALIFORNIA BLOW PIPE & STEEL CO. blower system; WAYNE mobile floor sweeper; TIMBER STRUCTURES, INC., glu-lam beams; VIKING AUTOMATIC SPRINKLER CO. sprinkler system; Design—INDUSTRIAL ENGINEERS & CO., INC., Tacoma, under Paul Savidge.



10 Skinner and trim saw is a 1-man affair. Tilting hoist is Globe, as is saw. Doorway at left opens to rail siding. Panels are automatically stacked.

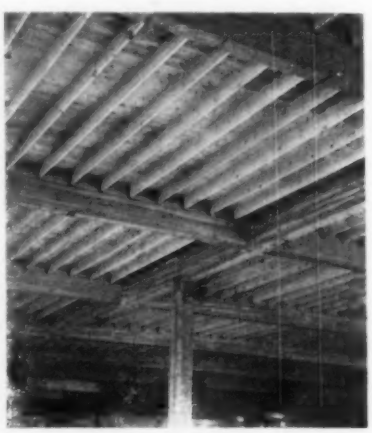


11 Sanding is done on this 8-drum Yates-American S800 unit. It is served by an American Manufacturing lift. Cabinet and paneling stock will also be produced.

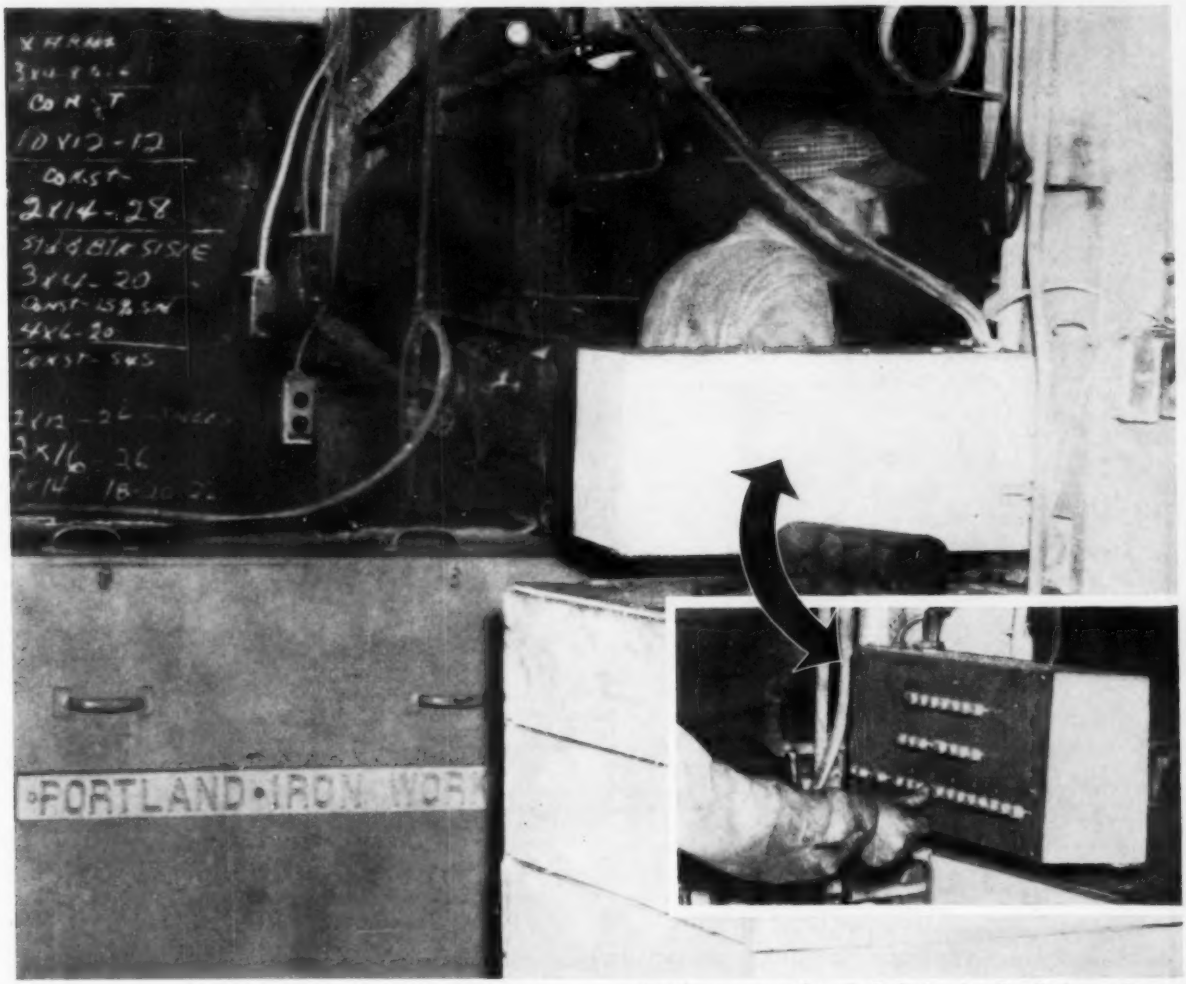


12 Elements of refuse disposal system are shown here. 1—main conveyor from plant; 2—cross transfer from main plant to barker building; 3—short conveyor for cores; 4—conveyor from barker to burner.

Details of roof construction and use of joint hangers are shown in this photo, snapped during construction, prior to application of aluminum paint. Roof panels are ⅝-inch plywood. Posts consist of pair of 10x12's. ■■



PORTLAND IRON WORKS



Push-button set works at La Duke Lumber Co., Cushman, Oregon

PUSH-BUTTON CONTROLS

Pamper your edger man and be rewarded with improved overrun, grade and quantity of lumber with the PORTLAND IRON WORKS push-button set works. The PIW push-button is fool-proof and needs no attention once installed. Your own mill electrician can understand it, can install it over a week-end and can maintain it without any special training. Call PORTLAND IRON WORKS for immediate delivery of push-button controls for edgers, trimmers and line bars. On-the-spot demonstration and estimate available without obligation. Portland telephone No. CA 7-1107; teletype PD565.

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REDUCE THE DRUDGERY OF HAND LABOR . . .

- USE OUR 2 MAN PATCH LINE TO MECHANIZE THE HANDLING OF PLYWOOD SHEETS IN YOUR PATCHING DEPARTMENT.
- OUR SYSTEM CAN CUT YOUR UNIT COST PER SHEET SUBSTANTIALLY THROUGH LABOR SAVING PRODUCTION OF A BETTER PANEL AND THROUGH FORMATION OF A REGULAR PRODUCTION FLOW.

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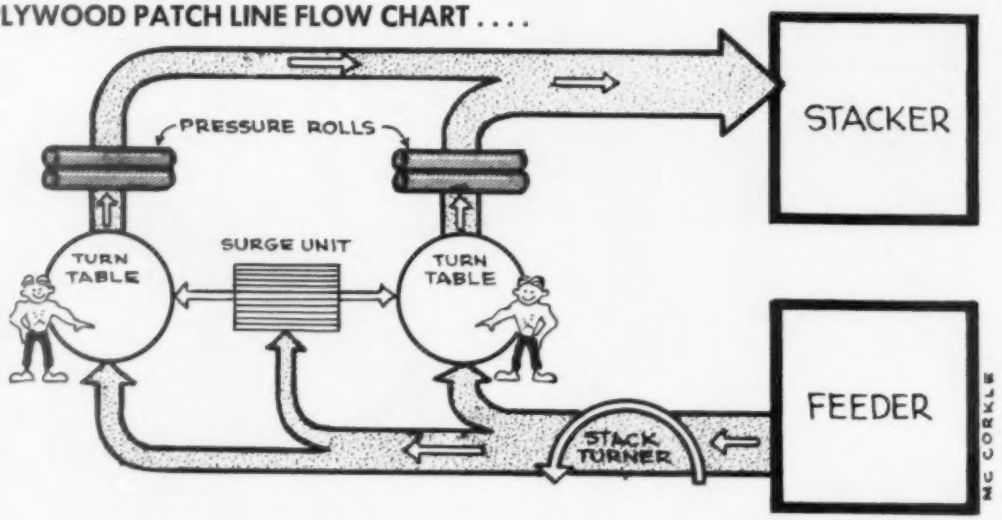
PLYWOOD PATCH LINE FLOW CHART . . . .



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2 SETS OF PRESSURE ROLLS to give each man the chance to dispose of the panels on which he has worked.

- SURGE UNIT . . . . to compensate for the variation of time required on individual panels.
- ALL FUNCTIONS ELECTRICALLY INTEGRATED TO REDUCE OPERATIONAL LABOR.

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REICHHOLD PLYOPHEN 2000-PGL makes it possible! In effect, it is glue-by-the-roll — a cellulose carrier sheet impregnated with phenolic resin. You simply cut the sheet to size as you would plastic overlay materials. Or, use the continuous sheet as supplied, for "automating" your plywood layup. In hot pressing, the resin remains on the glue line, provides maximum efficiency with minimum waste: eliminates uneven glue spreads, glue wipes and bleed-through.

PGL will tolerate higher moisture content veneers, and hence help solve the problem of blistering.

REICHHOLD PLYOPHEN 2000-PGL has been successfully tested in a wide variety of important bonding applications. It is faster curing and more economical. Available in 38", 50" and 62" widths.

For further information, send for Bulletin PLY-48.
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With PLYOPHEN 2000-PGL, panels can be pre-assembled, then pressed when convenient.

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Hydrochloric Acid • Formaldehyde • Phthalic Anhydride
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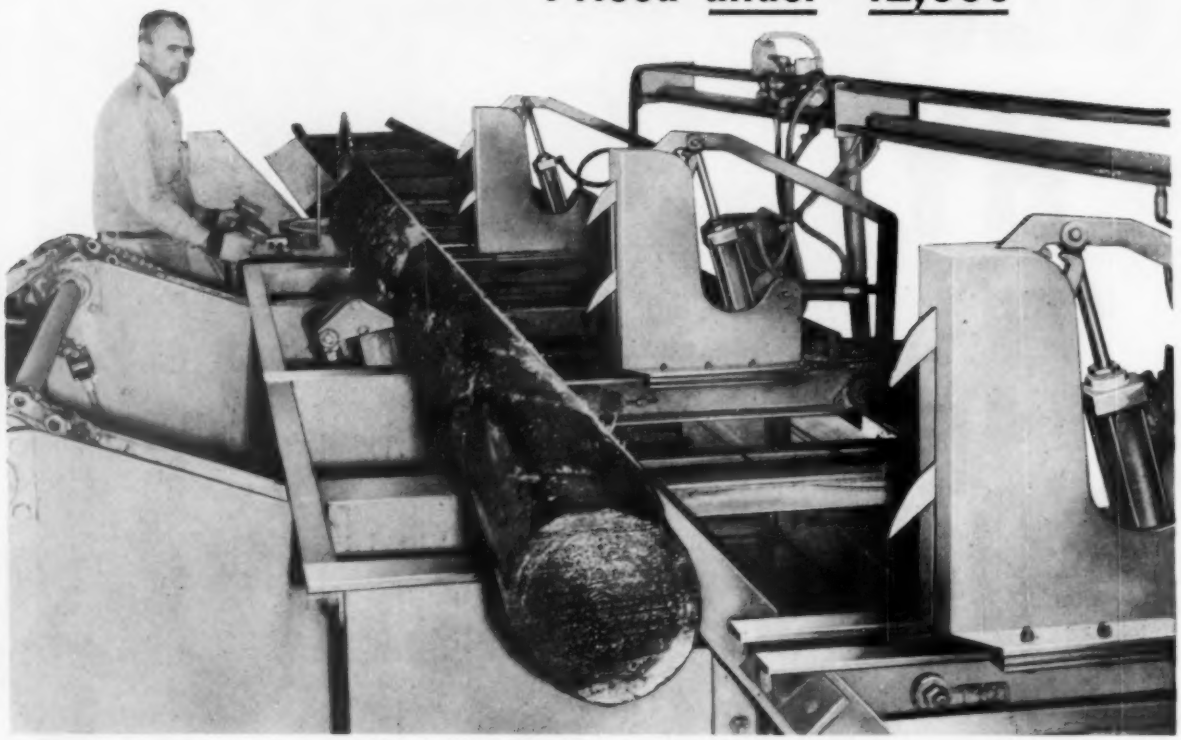
NEW L-M/OLINGER PONY MILL

For *Profitable* recovery of high grade lumber from small logs, cores, etc.

*Priced under $12,000**



for production of cants · dimension · studs · timbers · or cant resaw

The L-M/Olinger Pony Mill is designed for *highly selective sawing of top grades* from small logs, veneer cores, jack pine, tops, etc., in the 5″ to 20″ diameter range on carriage lengths of 8′, 16′ or 24′.

With all sawing done on the carriage, a *two-man* crew can turn out up to 20,000 board feet per shift—*twice* that amount and more, depending on the edger set-up and dimensions sawn.

The L-M/Olinger Pony Mill adapts to many mill applications and requirements, operating independently or in conjunction with other equipment. It makes an ideal rig for cant production and for resaw of cants.

Plywood plants can turn cores into studs!

**The "under $12,000" price tag is for the 8′ basic Pony Mill unit. Saw drive motor and circular saw are not included. Accessory equipment available includes: vertical edger, infeed and offbearing devices.*

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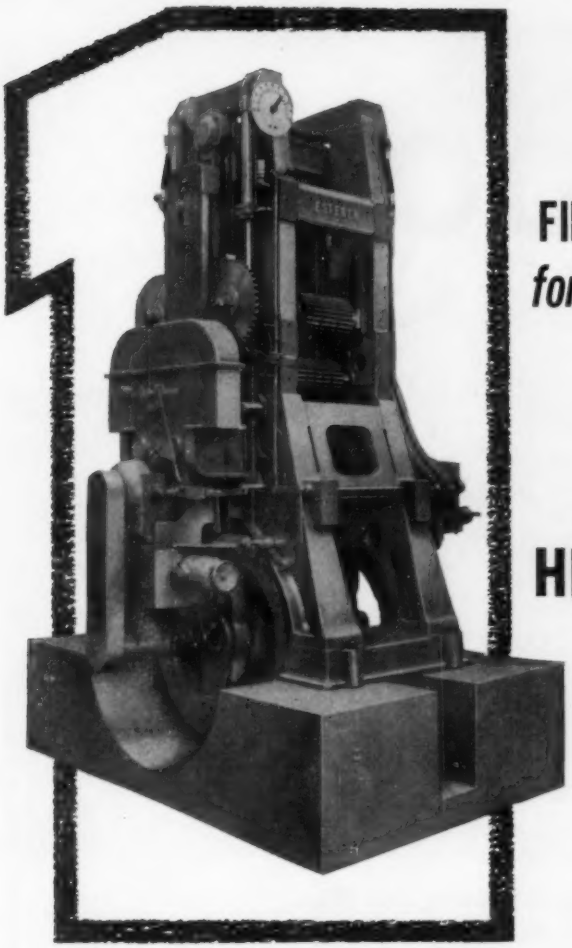

ESTERER

FIRST CHOICE IN 7000 SAWMILLS
for lowest production costs per/M

What western users say about the

ESTERER HD-30 HEAVY-DUTY GANG SAW

"We get fast, accurate sawing. The hydraulic feed is one of Esterer's best features", reports Wayne E. Rusk, v.p. of Elk Horn Lumber Co., Inc., Missoula, Montana. And from the machinery division manager of a southern Oregon mill—"Esterer's top feature is the automatic overhang. We've upped production, eliminated log sorting, lowered operating costs."

CHECK THESE FEATURES

ACCURACY. Holds board thickness variation to less than 1/16", ending planer waste. Yields up to 3 extra boards from each 12" log, over other sawing methods.

LOW MAINTENANCE and OPERATION COSTS. Sound design and excellent workmanship reduce maintenance to an absolute minimum. Chains and sprockets are American standard. A compact 14' high with simplest, most reliable components used throughout.

SPEED. *Continuous* feed for fast sawing. Quick-set adjustments, including automatic overhang, permit optimum feed speed for each different log. No pre-sorting required. *Dual* controls operate from saw or carriage.

POWER. Silk-smooth, vibration-free operation is assured with *double* crank arms and an automatic saw overhang. So beautifully balanced it requires usually only 75 yards of foundation.

GET ALL THE FACTS

Write for Esterer specification folders.
Model HD-30, 30" x 28" sash opening
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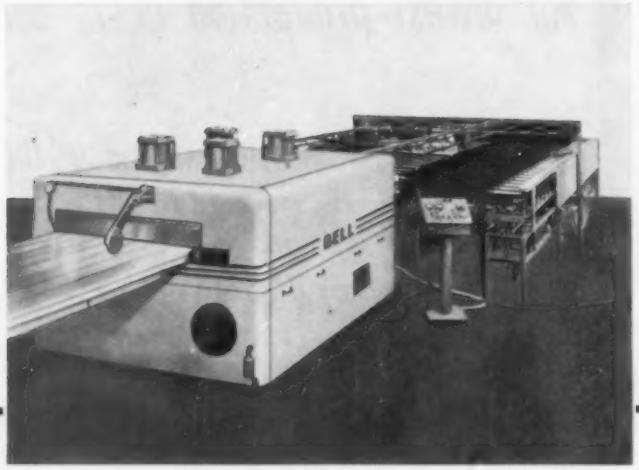
NEW ESTERER DISTRIBUTOR ON PACIFIC COAST

the new improved

BELL "300"



BOOSTS YOUR FINGER-JOINTING PROFITS

- **Glues Panels 8' to 24' Long Using Finger-Jointed Stock.**
- **Speeds Up Panel Gluing in Lumber Re-manufacturing Operations.**
- **Cuts Costs Drastically. Saves Space, Manpower, and Time.**

The Bell "300" shatters the barriers that have limited automated edge-gluing. It opens the door to new applications and new profits for any plant that produces panels in quantity.

Stock is fed through a vertical glue roller, assembled on a pre-layup table, moved to the infeed section, and pushed into the press with a motor-driven ram. Curing can be done in increments best suited to your job. Side pressure of 600 lbs. P.S.I. is available.

All parts — including generator — are designed as a single integrated unit and completely built by Bell — ONE UNIT — ONE COMPANY — ONE RESPONSIBILITY.

The '300" arrives ready for immediate and quick installation.

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105 JACKSON DRIVE
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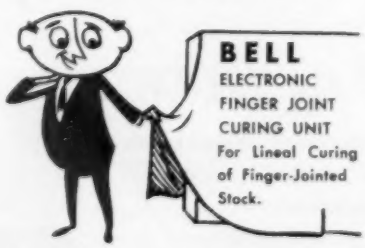
COMING SOON!



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ELECTRONIC FINGER JOINT CURING UNIT
For Lineal Curing of Finger-Jointed Stock.

WATCH FOR ANNOUNCEMENT

...exclusive CARY-LIFT feature eliminates costly, old-fashioned loading and unloading by hand

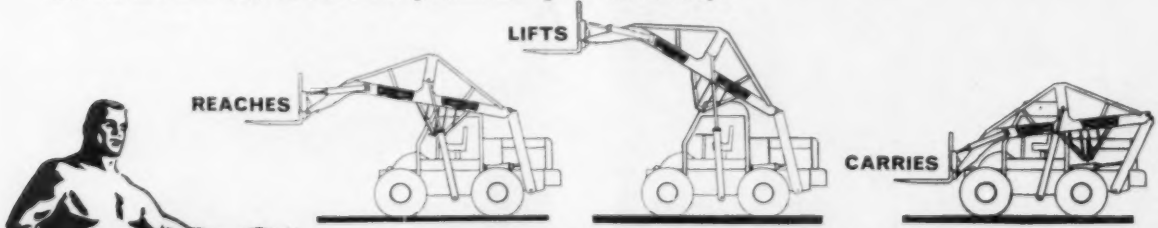
Cary-Lift not only performs the usual loader functions of carrying and lifting loads, but adds the *exclusive* BIG REACH — the patented 4 ft. hydraulic *forward reach* at *all* heights! It picks the load off the ground, carries it, then positions it high up and over on piles — no hands! And Cary-Lift comes in models that will handle capacities from 6000 to 60,000 lbs., depending on your requirements.

In the kilns, the high forward reach permits stacking to capacity in fast time . . . with *no hand labor*. Rail cars and trucks can be loaded from one side—a great time-saving feature. Also, the long forward reach provides ample clearance between the Cary-Lift and the side of a truck or rail car to prevent damage to equipment, while adding safety for the operator.

Powerful 4 wheel drive and high flotation tires guarantee continuous operation the year around, regardless of terrain or weather.

Cary-Lift does so many jobs around the yard that it is recognized as the most versatile all-purpose loader in the lumbering industry today. Owners find that *one* Cary-Lift *easily replaces* as many as *three* special-purpose machines—a big saving in equipment investment!

It will pay you to ask experienced Pettibone engineers to make a survey of your operation. They will show you how Cary-Lift can increase your production and profits. Write today!



CARY-LIFT /

Write for Bulletin P 185

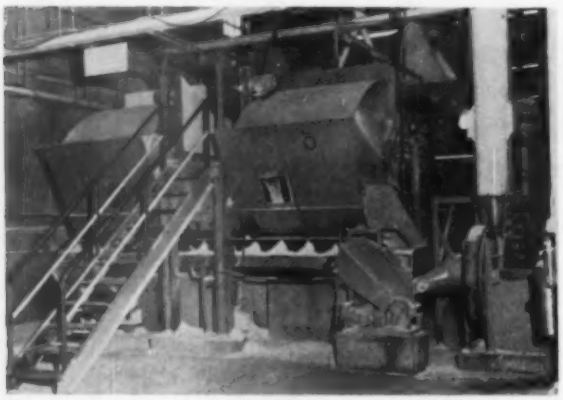
PETTIBONE MULLIKEN CORP.
4700 W. Division Street • Chicago 51, Ill.
SPaulding 2-9300

Abitibi Makes Board

Production of "Platewood" by Abitibi Power & Paper Co. followed nearly 10 years of research to find a way to produce a product from small material, principally poplar. The production plant pictured here is located at Sturgeon Falls, along with the company's hardboard and corrugated medium plants.

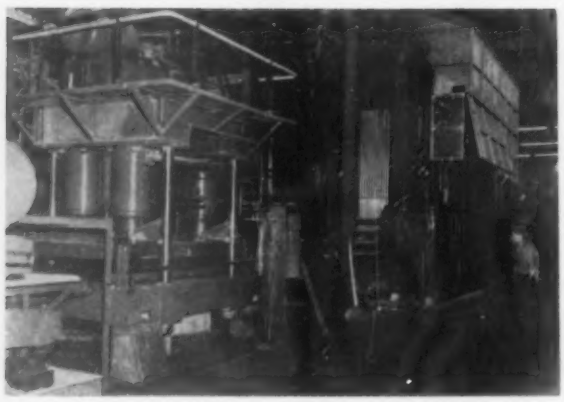
Platewood is made in 4x8-foot panels in thicknesses of ¼, ⅜, ½, ⅝, 11/16, ¾, 1 and 1⅛ inches. Properties include specific gravity of 0.63, moisture of 5 to 7%, moululus of rupture 3000, perpendicular tensile strength psi 70, hardness 750.

1 Company truck (left) dumps round wood, in this case veneer cores, into an initial conveyor leading into flaking department. The first 5-chain conveyor is controlled by an electric eye activated as wood drops to inclined 2-chain conveyor. Farm wood can by-pass this conveyor if desired and go through a 21-inch Cambio debarker. However, the company buys all the sap-peeled wood it can get. At right, Pettibone Cary-Lift equipped with cord-capacity grapple, loads one of company's Mack dump trucks with veneer cores. Cary-Lift also unloads farm trucks as they arrive at yard. Cores, 4 feet long and up to 8 inches in diameter, come from nearby plants.



4 From dry silo, flakes pass over weightometers that determine exact quantity of bonding agent required, and pass on to two Drais (French) mixers. Here, each particle is thoroughly and evenly coasted with urea formaldehyde resin plus catalyst, plus a special additive to improve moisture resistance. A pnenolic resin is used for weatherproof board called "Phenowood."

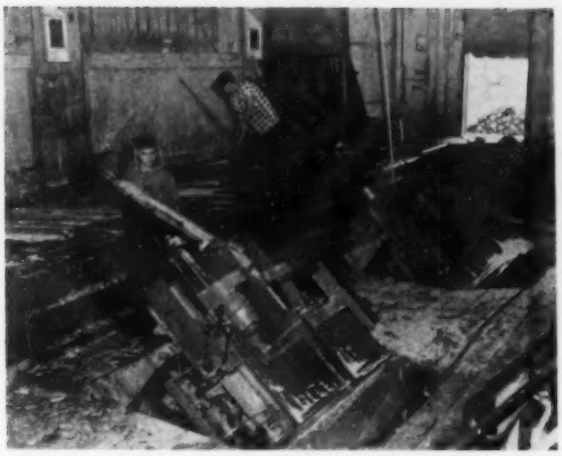
5 At forming station, treated particle are transported on a feeder through disperser rolls onto aluminum caul plates. Exact thickness of mat at this point depends on required thickness of finished board. For a ¾-inch finished product mat would be six inches thick. As loose board emerges from forming station, it is clamped, and twin American Manufacturing Co. circular saws, about 10 inches apart (arrow) move across continuous mat, cutting it to 8-foot lengths.



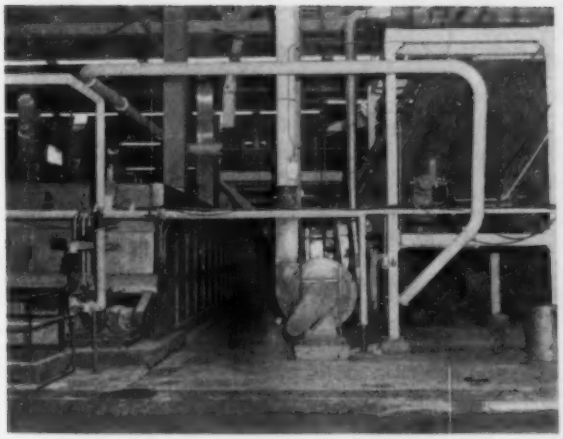
6 Mats next move to Baldwin pre-press (left) which is used for board ⅝-inch and thicker. All board is hot-pressed in Washington Iron Works press in background which has 15 openings and 56x102-inch platens. Pressing time for ¾-inch board is 13 minutes.

7 Upon leaving hot press, formed boards are separated from caul plates by suction and sent to fabricating department. This department centers on Mereen-Johnson 435H saws. Panels move from foreground of picture to back in cut-up process. Steps are: Durand loaders, Mereen-Johnson saws, Yates S800 sander and Durand stacker.

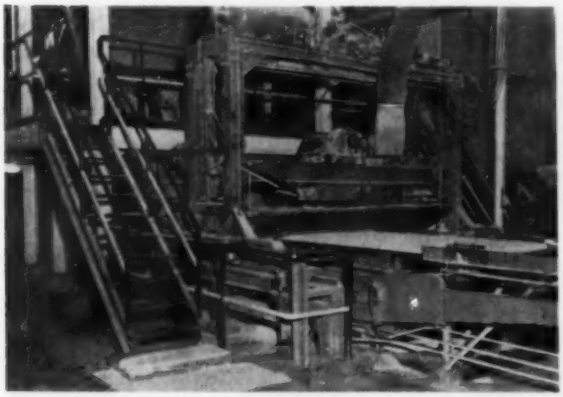
from Small Poplar Trees, Peeler Cores

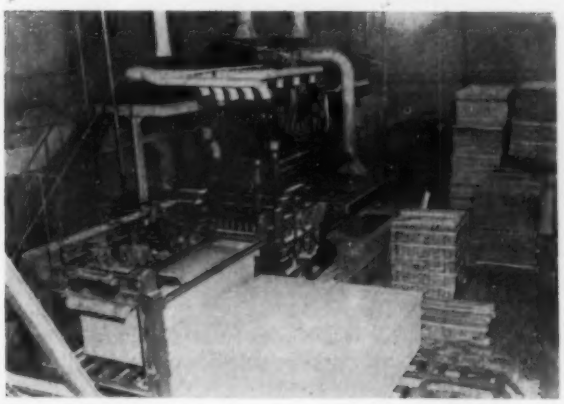


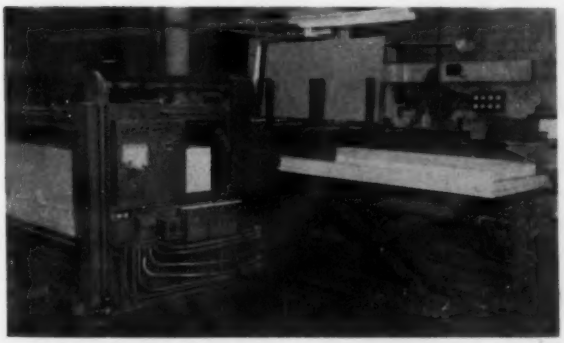
2 Logs are floated into flaker room in a parallel position in a concrete tank and fed to flakers by hand. The 4-foot wood is fed endwise into three Guilliet (French) flakers which quickly reduce logs to platelet-like shavings. There are four feed cylinders on each flaker, which sits at about a 45-degree angle.



3 After cutting, flakes are transported pneumatically to to the wet silo. During this time, part of the rejects of too fine or too coarse flakes takes place. Since air flowing from fans cannot pick up coarse pieces, they are thereby rejected and go to the nearby corrugated medium plant. Fine rejects are, in turn, removed by oscillating screens and go to the steam plant for use as fuel. The end of the battery of three Schilde (German) screens is seen on the right. On the left is one of the two Schilde particle dryers. Each dryer utilizes 140 psi of steam and is capable of drying 50 pounds of flakes per minute. Flakes enter the dryers with moisture content of about 42 to 52% and leave them with a moisture content of about 7%. At this point, the shavings are again picked up by air and are carried to four wind sifters where a further separation of course and fine rejects takes place. Then they go to the dry silo which, like the set silo, assures an even distribution of flakes in the succeeding stages. Up to now most of the processes have been preparatory, but the flakes are now ready for manufacture into "Platewood."







8 Between sander and stacker, boards are "flip-flopped (arrow) for inspection on both sides. Company-fabricated unit has four double sets of arms placed at 90 degree angles so that two sets are always horizontal, to receive and discharge boards, and two sets vertical, with the upper set holding a board. ■ ■

Common sight in Alaska mills is hotly burning burner. Much low grade material and large amount of residue are burned for lack of markets.

The Lumberman, and its companion publication The Timberman, recently visited southeastern Alaska to take a look at the 49th state's most important forest resources and the forest industry. This is one of a series of articles prepared for the two magazines after talking with dozens of lumbermen and loggers in the heavily timbered Alaska coastal belt.

Alaska Forest Products Manufacturers Face

Sawmilling in Alaska is comparatively underdeveloped. Both production and marketing problems hinder full use of the forest resource, but these are gradually being worked out.

Only 130 million board feet of lumber is sawed annually in the huge new state which has an annual timber producing capacity of 2.3 billion board feet.

Most of the sawtimber is in southeastern Alaska. The commercial forest belt extends along the coast and bordering islands. The national forest land (and nearly all southeastern Alaska is national forest) can produce about 1.8 billion board feet each year. More than half of this, however, is classified as pulp timber.

The 25 mills in southeastern Alaska have an annual total cutting capacity of but 115 million board feet. Only 14 of these produce 1 million feet or more annually. Changing market conditions make operation of the smaller mills quite unpredictable.

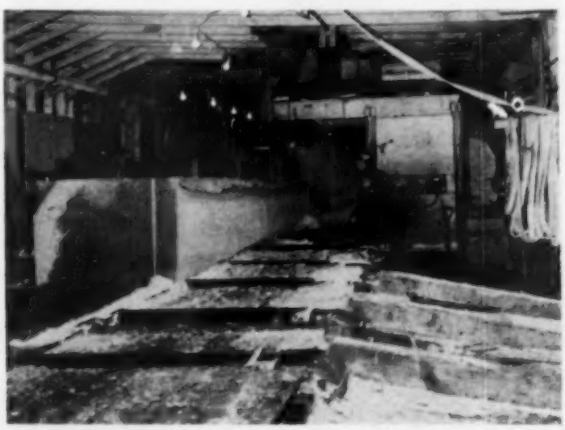
Largest of the mills are Wrangell Lumber Co. and Ketchikan Spruce Mills, but Pacific Northern Timber Company's band mill now in preliminary operations at Wrangell is eventually planned to cut about 40 million board feet annually on a two-shift operation.

In the vast interior area, about 70 tiny portable mills cut a total of 9 million board feet annually. The lumber, cut to rough standards, is strictly for local use and competes with imported higher standard, and higher priced, lumber.

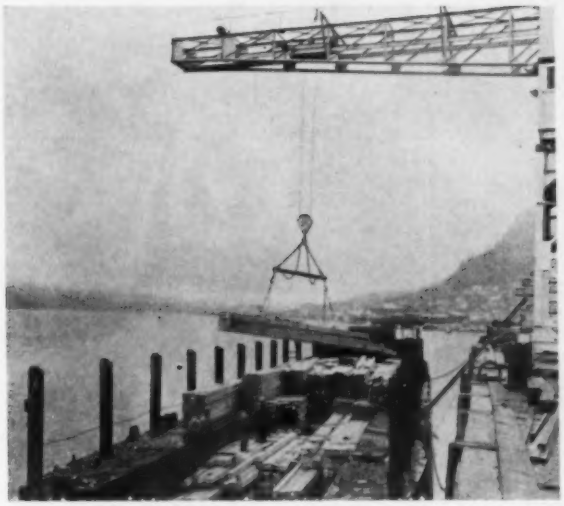
Forest products manufacturing, aside from the two large pulp mills in Ketchikan and Sitka, which together use about 340 million board feet each year, is almost entirely in spruce and hemlock lumber and nearly all of it is produced from logs from national forest timber sales.

Plywood was tried at Juneau, but the high costs of Alaskan labor more

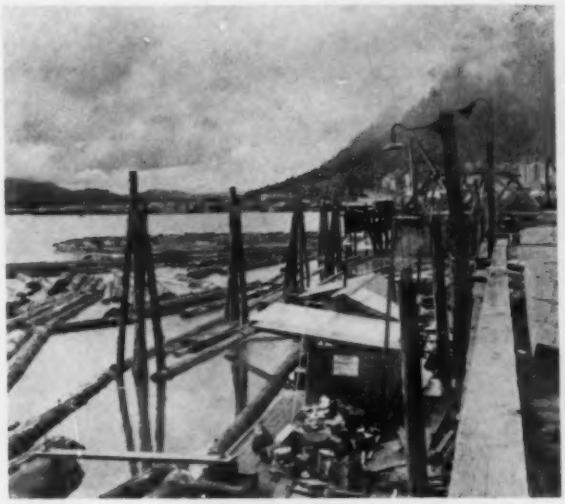
Log size variation can be seen on deck serving Columbia Lumber Co.'s Juneau mill. River bottoms develop large spruce, but many logs are small.



Large log rides on Peters carriage at Columbia Lumber Co. Juneau mill. Headrig is double circular. Mill saws mainly high grade spruce clears.



Water shipment is prime means of moving lumber in southeastern Alaska. Crane loads barge at Ketchikan Pulp Co.'s dock at Ketchikan.



Pond saw operates alongside dock at Juneau's Columbia Lumber Co. Notice how Alaska's cities are built right against the mountainsides.

Numerous Problems

than overbalanced the comparatively low stumpage costs for logs. The Alaska-produced plywood just couldn't compete favorably with that imported from the Pacific Northwest.

High grade spruce has been the featured output with eventual uses including piano sounding boards, wood specialty items such as folding doors, chairs, tables and ladder stock. Its appearance also makes it a favorite in the export market to Japan where it is used in light housing. The Japanese use it for exposed framing in their homes. They use the spruce without painting it, preferring the natural color.

Cedar is a "cinderella" species which has yet to see the glass slipper. A fair amount of cedar develops in the logging, but so far there is only a most limited market—mainly for local cuttings for cedar culvert stock to make wooden culverts for logging roads.

Several attempts have been made to establish cedar mills in Alaska, but these have been unsuccessful.

Lumber production costs are much higher in Alaska than for the mainland U. S. mills. Shipping costs add to equipment and supply costs and wage rates are higher.

Pay scales are about 25% higher than on the U. S. West Coast and the Alaska workman's compensation and unemployment insurance programs compound the high wage rates.

Compensation is secured through private insurance companies, but the requirements are set out by state law. The rates are about 50% higher than in Pacific Northwest forest industries.

The unemployment insurance plan costs employers about 3½% on gross payrolls up to $7,200 per worker per year.

Lumber shipping costs also eat into the profit margin. Freight rates give the southeast Alaska mills only a small freight advantage into the interior Alaska consuming areas. Consequently, the Pacific Coast mills with their lower production costs are quite competitive even in the "local" market. To move southeast Alaska lumber to the interior market requires

(Continued on page 72)

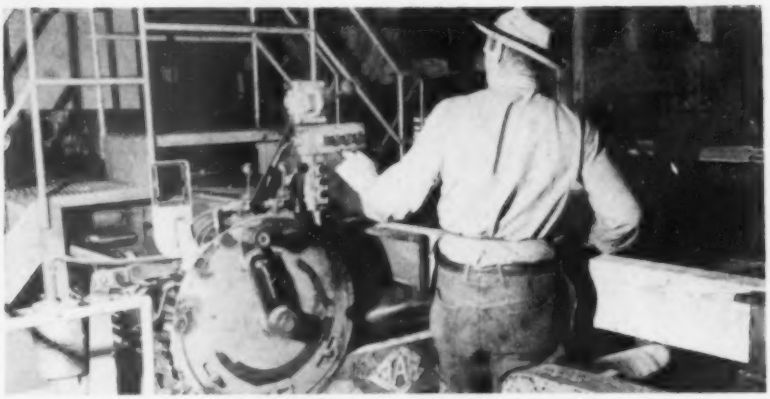
The more important Alaska mills and their annual production capacities include:

Annette Island Spruce Co., Metlakatla, (inactive) 20MM
Bay View Lumber Co., Juneau, circular 4MM
Columbia Lumber Co. of Alaska, Juneau, circular 10MM
Columbia Lumber Co. of Alaska, Sitka, circular 10MM
Columbia Lumber Co. of Alaska, Whittier, band 8MM
Kenai Lumber Co. (under construction), Seward, circular 9MM
Ketchikan Spruce Mills, Ketchikan, band 25MM
Pacific Northern Timber Co., Wrangell, band 40MM two shifts
Wrangell Lumber Co., Wrangell, band 25MM

Extreme tides with differences of 25 feet or more occasionally cause shuffling of mill operating schedules. Ketchikan Spruce Mills operations start late a few times a year for low tide. Log well is shown with minimum water at left. Outside view, right, shows "high and dry" logs waiting for tide.

Ideas at Work

to make operation more automatic at edger, resaw . . . extend barker trunnion life . . . check hog fuel build-ups.



Automatic features simplify operation

Resaw automation is aided by a M. A. Ward linebar setworks on Prescott 7-foot band resaw at Edwards Hines Lumber Co., Westfir, Ore. Most used sets—1, 2, 3 and 4 inches—are actuated by four buttons above operator's hand. Other sets are made mechanically by wheel at left. This automation of commonly used sets enables the resawer to up production and to watch more closely for grades.

Photoelectric cells halt

Pictures at left and right show location of photoelectric cells on the wall on either side of the steel chute feeding the fuel hog at Anderson & Middleton Lumber Co., Aberdeen, Wash. The beam passes through the round hole in the chute. It is immediately broken if scrap wood begins to pile up behind the hog. This automatically stops the feed chain and gives the hog a chance to recover and to grind up the accumulated material. When the wood drops below the beam, the feed chain starts up again, and operation resumes.

Plastic extends life of barker trunnion

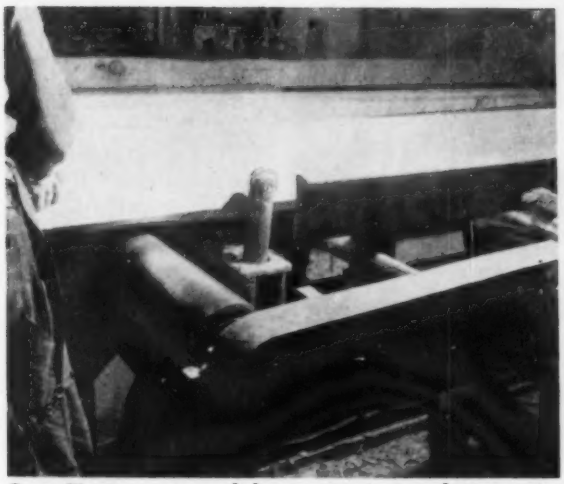
No more trouble has been experienced on breaking trunnion shafts on air cylinders of the Rotobarker at Canadian Western Lumber Co.'s sawmill at Frazer Mills, B. C., and operating division of Crown Zellerbach Canada, Ltd. Formerly, when this part broke off, it severed at the outside of the air cylinder barrel, since it was cast into the cylinder.

Under the direction of Charles Cox, a new trunnion was threaded into "Devcon A." The threads are 1¾ inches in diameter. Photo at left shows where the knife arm trunnion fits into position. Two more bolts were added

on each side. They were tapped into the ring ⅞ inches. This permitted the shaft to be extended 2½ inches.

Devcon A, a product of Devcon Corp., Danvers, Mass., is a metallic molding compound containing 80%

steel. At right is the knife arm cylinder removed from the barker to show more clearly the ring of Devcon into which the trunnion is threaded. No breaks were reported for a long period after this trunnion was installed. ■■



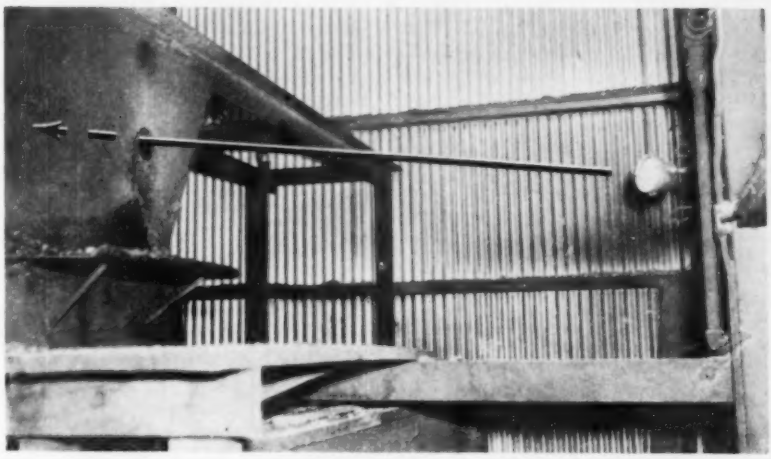
Cant flipper on resaw helps resawer to turn heavy cants. Air cylinder operated by foot pedal kicks flipper up. Free-spinning wheel at top of flipper allows it to slide easily.

Edger setworks is C&D unit. Edgerman pushes buttons to set three saws on Prescott edger. Adding machine-type operation simplifies job. ■■

build-up in hog chute

When the beam is blocked, a bell rings at the barker operator's station. It keeps ringing as long as the beam remains blocked. If it should ring for more than just a few moments, the barker man will hurry to the hog to check the trouble.

The device saves many man-hours. Previously, the chute had to be cleaned from the top. Now there is a small inspection door on the chute (on the far side in these photos) at beam level through which the obstruction can be easily cleared. ■■

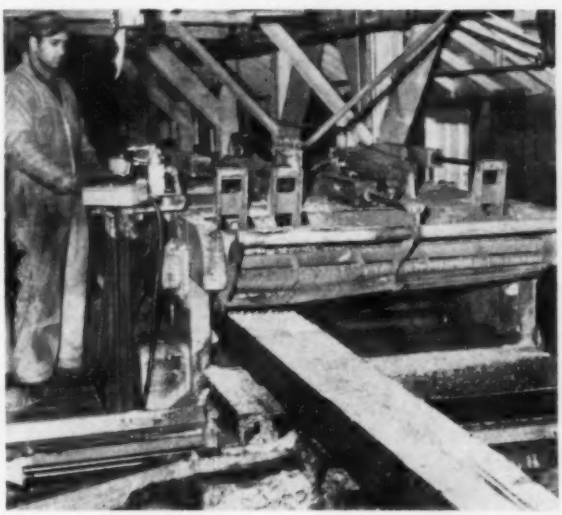


Edger controls increase output

An edger with Durand remote controls takes 50% of the mill cut, 45,000 feet per shift, at Yukon Lumber Co., Ltd., Vancouver, B. C. Before the remote controls pictured here were installed, edger saws were shifted manually from the floor. Now the operator is located above the edger and has his controls at his fingertips. His new location is also much safer.

There is a variable hydraulic feed on the rolls. The operator varies the speed of the infeed rolls according to thickness of the cant. Speed range is between 200 and 450 feet per minute, average is 350. The 12x60-inch edger is powered by a 200-hp dc electric motor. It has five saws 36 inches in diameter with an arbor of 6½ inches. When the gang is down, the edger can take the full output of the headrig.

Transfer chains and cant flippers ahead of the edger are air-cylinder operated, and are also controlled from the remote station. ■■



Fifth World Forestry Congress

Editor's Note: The major report on the Fifth World Forestry Congress is presented in the October issue of THE TIMBERMAN, companion forest industry journal of THE LUMBERMAN. This is because most of the sessions were directed to forestry practices. However, THE LUMBERMAN is presenting a series of important papers on wood product manufacture from those read at the meeting. The first two appear here. The 5th World Forestry Congress in Seattle, Wash., not only imparted valuable world-wide information, but must be considered to have an important impact on development of world-wide understanding and friendships. We believe that these world congresses play a major roll in bringing together peoples of the world in common understanding and respect.

Improved Techniques for Sawing Wood

By BERTIL THUNELL

Swedish Forest Products Research Laboratory, Stockholm, Sweden

Development during the last decade has been mainly in improving existing machines, not by radical changes of sawing principles.

What new ways may be pursued in order to saw more exactly, eliminate sawdust, and produce a surface that can be finished directly and, if possible, at an increased production rate?

Slicing. A method which has been tried is to slice logs directly in the way veneers are cut. A solution may be to fasten the log on a large revolving disk. Against this disk a knife is brought to bear which cuts board after board as the disk revolves.

Other methods may exist which structurally resemble ordinary horizontal veneer slicers. But in most cases the log has to be steamed before the slicing. The method is limited since the thickness of the boards can hardly be more than ½-inch. Furthermore, the dimensions of the machine will be excessive if large lengths of wood are required.

Set Knives. Similar ideas have guided the design of a new European saw, in which the blade has been replaced by thin chisel-like knives fixed one behind the other to cut deeper and deeper into the same kerf. The knives are stationary and while the log is fed through the machine the set of knives cuts longitudinal chips out from the bottom of the kerf. The width of the knives is 3mm, which means the same quantities of cutting waste as for conventional saws, but since the chips in principle are of the same length as the log, they may possibly be used for production of a high class pulp. Cutting speed in this case is equal to feeding speed.

From practical experience and research investigations, we know that the efficiency of the cutting procedure can be increased if the cutting speed viz. the edge speed can be increased. Consequently, new machines for higher cutting speeds have been developed. Suffice it here to mention the spectacular growth and importance of routing machine techniques in modern wood working.

There is no doubt that revolving tools — primarily circular saws — are best suited for such high speed work, whereas band saws cannot attain such high speeds. With a maximum cutting speed of up to 10 meters per second (11 yards per second), the frame saw is of course excluded from this discussion.

Temperature. A theoretical way of changing the cutting characteristics is to work at different temperatures. It is well known that wood, as is also

true of other materials, has certain softening or transformation points. Two such points occur one as low as at 40° to 50°C (104° to 122°F) and another at about 70°C (158°F) in red-wood. Concurrently with these discontinual changes there is also a continual change of the properties, e. g. the increased plasticity and deformation occurring when temperature is increased under moist procedures of steaming, and in the heating of logs in water that are used in veneer cutting.

In the manufacture of boards and planks these characteristics have hardly been utilized as yet. Although it is difficult to predict today how equipment using such properties should be constructed in detail, the advantages to be obtained seem to be substantial.

Thus, in principle, there is a possibility to influence the cutting process in sawing. The possibilities of a geometrically freer sawing might be combined with the material-saving slicing method and other advantages. A partial heating, e.g. high-frequency heating, seems to be a requirement for satisfactory heat economy.

Sonics. A general principle often used in today's technique is the use of movements similar to vibrations. Applied to mechanical oscillations within a certain frequency field the process is called "sonic" or possibly prefixed "ultra-sonic." The frequency may amount to some hundreds of kHz.

If a body or a part thereof — in principle of a size down to molecules and atoms — is caused to oscillate or if a change is brought into already existing oscillations, this will be equal to supply of energy.

The bonds in a system of macroscopic substances can thus selectively be made to burst, if this supply takes place in the form of oscillations at frequencies coinciding with the natural frequency of the bond, and the energy losses are not too high owing to the retarding of the material. The retarding of wood is very high.

For a cracking to take place, the macroscopic form of the body must be taken into consideration. Thus, if wood is to be cracked geometrically through macroscopic oscillations, selectively and under control, the initial body must be so fixed and have such a geometrical form that the cracks caused by resonance coincide with the cut wanted. Since there are several reasons why there are no probabilities of bringing the wood into oscillations that result in a cracking, a practical method of controlling this cracking is quite impossible.

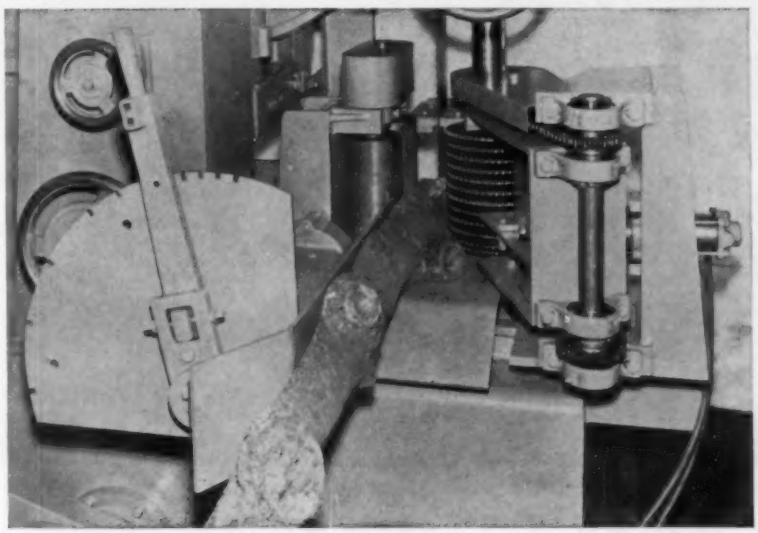
While today a resonance cracking on a large scale or a "sawing" influenced by radiation hardly is feasible, there are certain possibilities, according to what is applied in the metal industry, e. g. when machining hardened tool steel and sintered carbides.

There is yet a possibility through a combination of a conventional cutting — of course somewhat modified — and a form of oscillation movement. Primarily, different types of sonic vibrations are to be investigated, but also oscillations in electrostatical and electromagnetical fields ought to be given attention. In general it will probably be the tool that performs the vibration.

It is also known from cellulose research, that ultra-sonic treatment affects properties of the fiber material not only in fiber suspension but also in the pure fiber product. There is therefore ample reason to suppose that the cutting process in principle can be affected by an ultra-sonic field. Possibly the effect may not be confined only to the cutting process, but also to the formation of sawdust particles if any. From this we might expect an improved sawdust flow, a smoother surface and perhaps a narrower sawkerf. ■■

(More REPORTS on next page)

New STUB LINEBAR RESAW



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Full range set lever opens fence to maximum of 6″ inside saw line. Pivoting press roll opens to 12″ outside saw line through foot operated air valve. Maximum depth of cut is 22″. Feedworks is integral part of machine.

Five speed transmission drives feedworks from lower shaft eliminating separate expensive variable speed mechanism.

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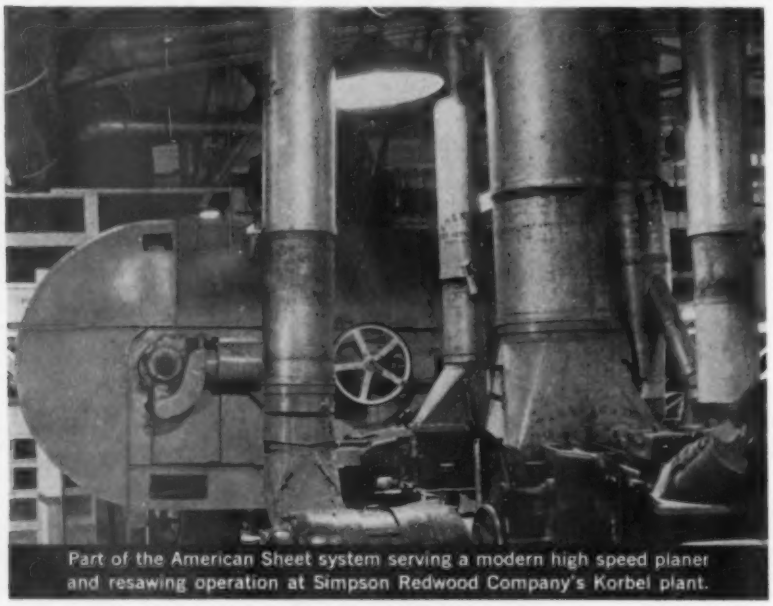
WORLD FORESTRY CONGRESS REPORT

Use of Sawdust and Other Mill Residues

By HALVOR SKJELMERUD
Norsk Treteknisk Institutt
Blindern, Norway

In the Scandinavian countries mill fines from most species for cattle bedding is a major outlet for sawdust and shavings.

One of the important properties of dry sawdust and shavings often overlooked is its excellent thermal insulating quality which in dry form is close to that of mineral wool. Especially in countries in which climate and high cost of fuel make it desirable to provide good heat insulation in housing, dry sawmill fines have long been used for this purpose. Such insulation is usually packed into desired spaces in walls, floors, and ceilings. In rural dwellings this application has been a common practice throughout the Scandinavian countries. Lately it has been used very successfully as an insulating element in prefabricated house construction.



Part of the American Sheet system serving a modern high speed planer and resawing operation at Simpson Redwood Company's Korbel plant.

Suitability of planer shavings for particleboard production will differ with the various kind of shavings. Thus it appears that shavings made on a planer with stationary knife are more suitable than those produced by a rotary cutter.

It is here necessary to recognize that mill fines individually are not very homogeneous or uniform in size and fiber characteristics. There is also the question of finding suitable mechanical and chemical means of gently defiberizing the rather small form of fiber bundles represented by sawdust particles and other mill fines.

On the basis of present technique and equipment, mill fines so far are used only to a limited small extent in making any fiber manufactured products. This may seem surprising since large amounts of sawdust and shavings are available at many integrated mills at prices which are rather low compared to pulpwood.

Technical problems involved in the cooking of sawdust can undoubtedly be solved. The clogging of screens and valves should be avoided by cooking in continuous digesters, where there is no liquor circulation system. This is what Potlatch Forest, Inc. in Lewiston, Ida., is doing as one of the very few mills in the world today utilizing sawdust as raw material for paper pulp.

One of the more promising pulping methods for sawdust from coniferous species is a straight mechanical defibration in disc mills to a mechanical pulp or groundwood. The Powell River Corp. in Canada has investigated this process and concludes that there can be no real doubt that the production of a groundwood-type pulp from sawdust is practical and that, without chemical pre-treatment, the power consumption would be about the same as for groundwood. The pulp would be slightly weaker than groundwood. Even should this pulp be too weak for use in newsprint it can probably be used to advantage in paperboard.

Chip developments. Two innovations have aroused great interest, particularly in USA and Canada. The development of the so-called pulp chip sawblade, designed to produce small chips rather than ordinary sawdust. The heavy and uniform bite per tooth

It's an ALL-AMERICAN team at Simpson Redwood, Korbel

Blower systems at Simpson Redwood Company's Northern California operations at Arcata and Korbel are all American.

The American Sheet low pressure blower system at Arcata is actually three systems in one, serving high speed planers and trim saws. Waste and planer shavings are moved 750 feet direct to the burners. At the Korbel plant, American engineered and built two blower systems which serve planers and saws. Both systems have operated with a minimum of adjustment from the very first.

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required for this purpose is obtained by using about one-third the number of teeth found in ordinary saws. Provided that this type of sawblade can be designed to operate with about the same performance as other modern saws, it may be of significance in the future utilization of sawdust for fiber.

Another development with a similar objective, is the so-called planer chipper. The purpose of this machine, which has been given considerable attention on the west coast of USA and Canada, is to remove excess thickness of rough lumber by producing a special type of chip or shavings more adaptable for the production of fiber than ordinary shavings from rotating planerheads. It is reported that chip quality compares with those from normal chippers.

With the object of reducing bulk, sawdust and shavings and to some extent bark have to a limited degree been compressed under high pressure into briquettes for domestic fuel. Briquettes present a compact, clean and convenient form of solid fuel for stoves and fireplaces. Since sawdust, shavings, and bark present many problems in the search for their profitable use, the possibility of briquetting should not be overlooked.

With the growing use of bark-free slabs and edgings for pulp the question of finding economical methods for removal of the bark has become important. Comparatively little is as yet known about the chemistry and physical properties of barks and their composition varies substantially by species.

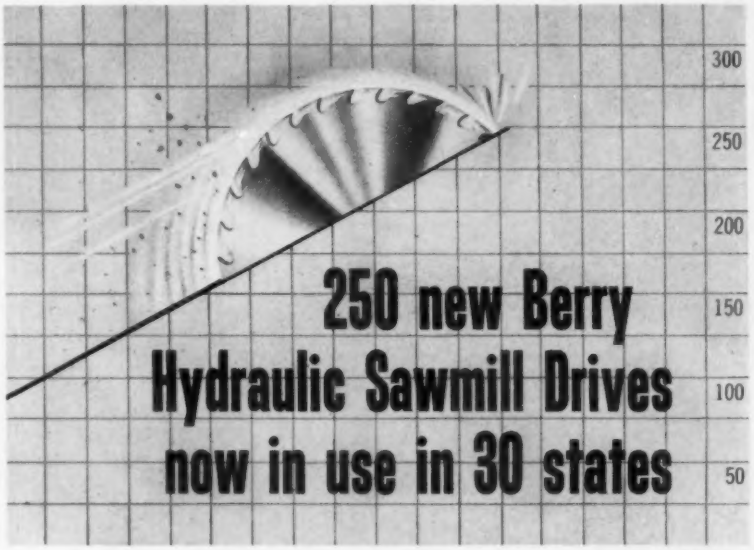
Reduction of saw kerf and improvement in sawing accuracies are as important in this program as finding ways of using unavoidable residues. On this score, improvements are recorded on all types of sawmill machinery. Particularly significant is the trend toward more use of modern band saws operating with great accuracy.

Only through close cooperation between the various industry branches and with the aid of research could the many problems confronting integration in the utilization of harvested timber be solved.

Utilization possibilities for residues vary broadly from country to country and from region to region, depending largely on the size, structure, location and the diversity of the pulp and board industry as compared to the sawmill industry. In localities in which various types of forest products industries are well represented, the possibilities for integrated utilization are the best. This may particularly be evident in the nordic European countries, where in addition to a close inter-industry collaboration, a greater volume of industrial wood is consumed in various pulp and fiberboard industries than in all other wood industries together. Properly handled and sufficiently clean residues in solid form are here considered a normal source of wood. The prices paid for mill residues are negotiated and fixed on the basis of their value as a raw material and not as a waste to be disposed of. Small and large sawmills are today all important parts in this integration program.

Economic integration of the various industry-branches is not essential for the program. A system of physical integration, in which residues are collected in some standardized form with an assurance of supply through long-term contracts with necessary specifications as to quality requirements, may serve the purpose just as well.

Perhaps the most significant side of the whole utilization issue today is the generally more favorable attitude towards finding ways and means in solving the problems encountered. Mill residues are increasingly being appraised and accepted as raw material for further processing. To find more efficient use of these residues constitutes an essential part of the program of "making our forest supplies go farther and serve mankind better."



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Perhaps a Computyper could solve your own billing problem. Ask your local Friden Systems Man for complete information. Or write: Friden, Inc., San Leandro, California.

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LOG PROCESSING

(Continued from page 35)

operator if the bin is about to overflow. All conveyors are interlocked to avoid pileups.

A system currently being installed will enable trucks to be filled with hogged bark for sale for horticultural use. A steel flap directs the hogged bark from the infeed chain to a belt delivering it to a shaker screen. Fines drop onto another belt to be conveyed to the truck, parked under the unit. Oversize pieces are shook back down into the surge bin.

The barker and saw installation was designed and fabricated by the Nicholson Manufacturing Co., Auburn, Wash., and was installed by Giustina Bros., crews. Control coordination was by Controls & Communications.

Equipment. NICHOLSON 60-inch ring barker; JEFFREY hammer hog; LINK-BELT shaker screen; REMCO air cylinders; SUMNER 72-inch chipper; SUTORBILT 16x26 blower on RADER PNEUMATICS high pressure blower system; HANNIFAN air valves; GENERAL ELECTRIC motors and barker speed control; MINDER bark conveyor; LOUIS ALLIS Dynamatic drive. ■■

Vancouver Plywood Buys Interest in Oregon Firms

Half interest in Hub City Plywood Corp. and Three Sisters Plywood, Inc., both Albany, Ore., has been secured by Vancouver Plywood Co. Frost Snyder, president of Vancouver Plywood, becomes president of the two mills. Elton Disher, one of the founders of the Oregon companies, continues as general manager and executive vice-president.

Combined, the two mills comprise one of the West's largest sheathing operations, producing 18 million square feet, 3/8-inch basis, a month.

Vancouver Plywood is now the fifth largest plywood and lumber sales organization in the United States. It represents a number of western mills producing interior, exterior, marine, sheathing, hardwoods and specialties.

Chip Producing Plant Planned in Washington

Recently established Cascade Fibre Co. will build a barker-chipper plant in Chehalis, Wash. to utilize residue from surrounding mills. President of the new firm is A. G. Powell, Port Towsend, Wash.

Powell says the new installation will take residue from mills within a 20-mile radius of Chehalis. Chips will be sent to plants in Longview.

HEIL Dryers help boost sales 16%

Management at Pope & Talbot's new particle board plant at Oakridge, Oregon, attributes a 16% sales increase to better utilization of wood residue.

Two HEIL Dryers are used. The small dryer at left reduces moisture content of Douglas fir flakes to about 6%. The larger dryer handles planer shavings.

One shift currently produces 350,000 sq ft of ¾-inch particle board, flakeboard and mixed particle-flakeboard. Building trades use the particle board for floor underlayment and core stock. Flakeboard goes into table tops, desks, counters, store fixtures.

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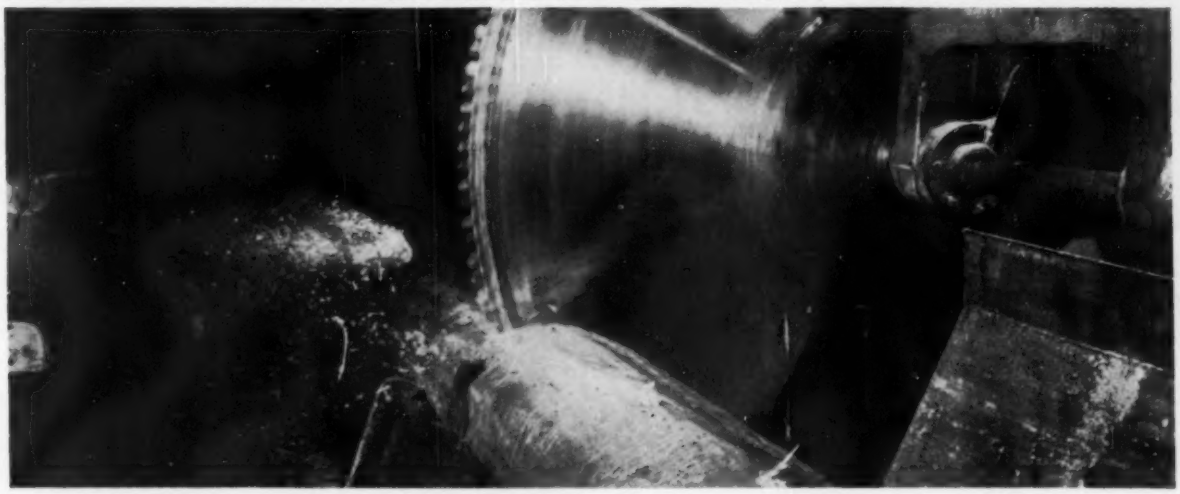

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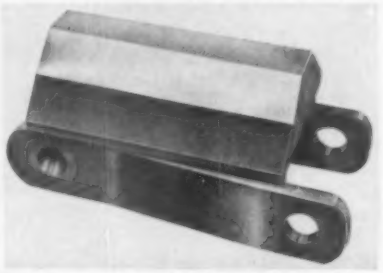

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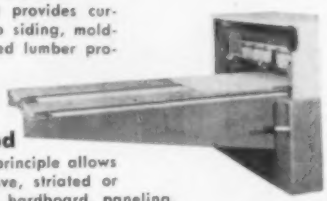

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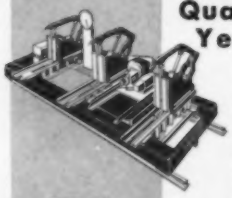

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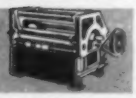

NORTHEAST OHIO MACHINE BUILDERS, INC.
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MARY OLSON, recently converted from a steamer to barge, is 335 feet long, with a beam of 44 feet and a draft of 26 feet, 9 inches. Her deadweight is 6000 tons. She has five holds, with a dry cargo capacity of 250,000 cubic feet, and a lumber capacity of 4 million board feet. She is equipped with three Unit Mariner cranes with 70-foot booms, powered with General Motors Detroit 3-71 diesel engines. The bilge pumps, deck machinery, etc., are air-powered, with air furnished by a Gardner Denver compressor powered by a Cat D13000 diesel engine.

Olson Concentrates On Barging Work

Oliver J. Olson & Co., with offices in San Mateo, Calif., and its home port, San Francisco, has converted almost entirely from a coast-wise steamer operation to barging. The most recent conversion was the *Mary Olson* pictured above.

Just last year the Olson firm took delivery from Todd Shipyards Corp., Houston, Texas, of two of the largest steel cargo barges ever built — the *Florence* and her twin, the *Forest*. Net weight of each barge is approximately 1700 tons, and they measure 272x68x24 feet. Cargo capacity of each is 6300 tons.

The barges are designed for world-wide transportation of lumber, paper pulp, plywood, particle board, and miscellaneous bulk cargoes. Grade "E" petroleum can be carried in the wing and double bottom compartments of 15,000 barrels capacity. The capacity for dry cargo is 250,000 cubic feet, and for lumber, 6 million board feet. Total dead weight of the barges is 8,000 tons.

Both barges are equipped with two LeTourneau cargo cranes — 30 ton capacity with 70 foot booms. The diesel-electric power plant of each of the cranes is set on a pedestal 28 feet over the deck. The power units consist of General Motors Detroit 7-21 engines direct connected to LeTourneau 440 volt A/C generators.

The eight-inch suction discharge pumps are driven by electric motors, with juice furnished by a 40 kw generator, driven by a General Motors Detroit 3-71 diesel engine.

At the present time the company operates four barges and two freighters, the *George Olson* and the *Cynthia Olson*.

• Rother Lumber Co., Missoula, Mont., has joined the American Institute of Timber Construction. Robert E. Jeakins, manager of Rother, will represent his company in AITC.

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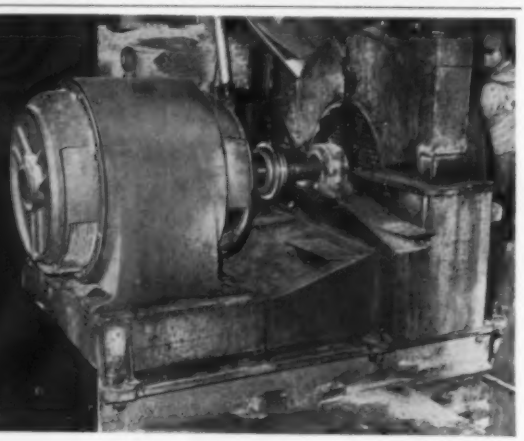

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Standard Grades Near On White Fir Dimension

Standardized white fir dimension grading rules, acceptable to the grading bureau of Western Pine Association and the West Coast Lumberman's Association, moved another step nearer actuality at the semi-annual meeting of the Western Pine Association in Portland, Ore., in mid-September.

The association's board of directors approved an earlier agreement reached by representatives of the associations which would draw up specific grading rules for white fir, retain present WCLA grade names, and make certain revisions in rules as they now appear in the grade books of the two regional groups. The changes represent slight readjustment of standards as regards skip, wane, splits and knots.

If approved by the West Coast grading committee, the new rules will go into effect as soon as grading supplements are published.

FHA proposals for specific minimum board grades of sheathing, subflooring and roofing have caused concern with the pine men. The minimum grades proposed would, in the case of Western Pine, limit use to No. 3 Common or better. For West Coast Lumbermen Association it would be limited to standard or better. The pine men plans to meet with WCLA to discuss the situation and together present a recommendation to FHA.

More promotion money. The board of directors approved an executive committee recommendation that the association contribute 6 cents per M to the National Wood Promotion Program without increase in WPA dues rate. This would supplement the region's current contributions to the program, now being made by individual mills on a voluntary assessment basis. The board authorized appointment of a special committee to study the situation and report to the executive committee in December. This would be the basis for a final decision on the matter next spring.

Mortimer B. Doyle, executive vice-president of the National Lumber Manufacturers Association, explained that the additional 6 cents would be concentrated in technical services. Its expenditure would be divided 4.2 cents for technical services, 1.5 cents for merchandising and .3 cents for other uses.

New markets must be found for lumber, advised J. D. Bronson, president of the association. "We must

old the markets we have, find new ones and recapture, wherever possible, those lost to competing materials."

W. E. Griffee, secretary-manager of the association pointed out that while residential building volume was off near 19% in the first seven months of 1960, production from the Western Pine region was down only 9% from the all-time high of the same period of 1959.

"So far as volume is concerned, this is not a large drop for an industry so dependent on the fluctuations in the housing construction," Mr. Griffee said. "The trouble has been in continued high production which built up stocks at the mills."

Safety record of the Western Pine operations has been improved substantially in the past four years with the work-injury rate reduced by 32%. The pine men were warned to watch out for government intervention on the basis of published records that show a high accident rate. This has happened in the maritime industry.

STATEMENT REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933 AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT AND CIRCULATION OF THE LUMBERMAN, published monthly, except in December when publication is semi-monthly, at Portland, Oregon for October 1, 1960.

1. The names and addresses of the publisher, editor, and business managers are: Publishers: Wm. B. Freeman, Miller Freeman, Jr., 500 Howard Street, San Francisco 5, California; Editor, Dean F. Sherman, 731 S. W. Oak Street, Portland 5, Oregon; Sales Manager, Charles W. Cowman, 731 S. W. Oak Street, Portland 5, Oregon; Business Manager, James C. Wallace, 731 S. W. Oak Street, Portland 5, Oregon.

2. The owner is: The Timberman Corporation, 731 S. W. Oak Street, Portland 5, Oregon; Miller Freeman Publications, Incorporated, 500 Howard Street, San Francisco 5, California; Wm. B. Freeman, Miller Freeman, Jr., 500 Howard Street, San Francisco 5, California.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: 14,992.

MILLER FREEMAN, JR., Publisher

Sworn to and subscribed before me this 1st day of October, 1960.

(SEAL) BARBARA M. HAMPSON, Notary of the Public, San Francisco, California.

(My commission expires February 18, 1962.)

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FOREST PRODUCTS STOCKS

NOMINAL QUOTATIONS

La Salle Securities Co., Investment Securities, 208 La Salle St., Chicago, Ill.

October 3, 1960

STOCKS	Paid 1959	This Month Bid	This Month Ask	Last Month Bid	Last Month Ask
Ambassador Oil, Com...$	.....	3⅜	C	4	C
American Forest Products, Com.	1.00&S	27	29	28	30
Anderson Tully Co., Cap. Stk.	20.00	350	OW	350	OW
Atlas Plywood, Com.	.....	14½	C	16	C
Atlas Plywood, $1.25 Pfd.	.....	26	28	25½	27½
Biles-Coleman Lbr. Co., Com.	*	18	OW	19	OW
Boise Cascade Corp. Com.	.60	15	16½	19⅜	21
George E. Breece Lbr. Units	.05	2½	OW	2½	OW
British Columbia Forest Prod., Com.	.....	10¼	C	11½	C
Brooks-Scanlon, Inc., "A"	.80	19	OW	19	OW
Brooks-Scanlon, Inc., "B"	.80	19	OW	19	OW
Calaveras Land & Timber Co., Com.	2.00	24	27	25	27
Calcasieu Paper Co., Com.	1.50	30	OW	35	OW
Cascades Plywood Corp., Com.	1.75	25	28	27	29
Central Coal & Coke Co., Com.	1.00	30½	32½	31	33
Cherry River Boom & Lbr., Com.	.....	50	OW	48	OW
Chicago Mill & Lbr. Co., Com.	1.25	19¼	21¼	20½	22
Cloquet Lumber Co., Com.	*	1	OW	1	OW
Consolidated Naval Stores, Cap. Stk.	30.00	1060	OW	1060	OW
Container Corp., Com.	1.00	21⅞	C	22½	C
Container Corp., 4% Pfd.	4.00	90½	C	89¼	C
Crossett Company, Class "A"	.65	39	42	43	46
Crossett Company, Class "B"	.65	39	42	43	46
Crown-Zellerbach, Com.	1.80	44	C	47¾	C
Crown-Zellerbach, $4.20 Pfd.	4.20	92	C	93½	C
Curtis Companies, Com.	.....	6⅞	7⅞	6¾	7¾
Dierks Forests, Inc., Com.	5.00&S	152	OW	152	OW
Evans Products, Com.	.50	11	C	12¼	C
Fordyce Lumber Co., Cap. Stk.	1.50	55	OW	55	OW
First Lumber Corp., Com.	.....	5½	6½	6¼	7¼
General Plywood, Com.	.....	16½	C	18¾	C
Georgia-Pacific Co., Com.	.50&S	46	C	53¼	C
Harbor Plywood, Com.	.40	22	C	25⅛	C
Edward Hines Lumber Co., Com.	2.50	34	36	34	36½
Insular Lumber Co., Com.	1.25	11½	OW	12	OW
International Paper, Com.	3.00&S	85¾	C	96	C
International Paper, $4 Pfd.	4.00	92½	C	97½	C
Keyes Fibre Co., Com.	1.20&S	14¼	15¼	14¼	15¼
Kirby Lumber Corp., Com.	2.00	50	52½	50	52
Longview Fibre Co., Com.	3.50	82	86	83½	86
Louisiana Central Oil & Gas, Com.	10.00	50	OW	51	OW
Louisiana Long Leaf Lumber Co.	5.00	157	OW	157	OW
Louisiana Sawmill Co., Com.	.....	½	OW	½	OW
MacMillan & Bloedel, "B" Com.	1.40	13¾	C	16	17
McCloud River Lumber Co., Com.	4.00	90	100	100	107
McCloud River Railroad, Com.	3.00	42	OW	42	OW
Meadow River Lumber Co., Com.	*	225	OW	225	OW
Medford Corp., Com.	11.00	200	240	235	250
Mississippi Land Co., Cap. Stk.	1.60	12	OW	15	OW
Northwest Paper Co., Com.	.15&S	23	26	25½	28
O. & N. Lumber Co., Cap. Stk.	2.00	42	OW	42	OW
Olin Oil & Gas, Com.	2½ %S	16⅜	C	18	20
Ozan Lumber Co., Com.	4.00	92½	OW	92½	OW
Pacific Lumber Co., Cap. Stk.	12.00	315	330	325	OW
Pickering Lumber Co., Com.	.40	7¾	8¾	8⅝	9⅝
Pine Tree Manufacturing Co.	.....	50	OW	50	OW
Pope & Talbot, Inc., Com.	1.25	29	31	30½	32
Pope & Talbot, Inc., Pfd.	.30	4¾	OW	4¾	OW
Potlatch Forests, Com.	1.00	43	45	47	50
Puget Sound Pulp & Tbr. Co., Com.	.80	20½	C	23⅛	C
Richmond Cedar Works Mfg., Com.	.....	½	1	½	1
Richmond Cedar Works, Com.	.....	⅝	1⅛	¾	1¼
Roddis Plywood, Com.	.40&S	17½	19	19½	21
St. Regis Paper, Com.	1.40&S	31⅜	C	37	C
Southern Minerals Corp., Com.	.....	3¼	4¼	3¾	4¾
Southwest Forest Indust. Inc., Com.	.....	12¾	13¾	13¾	14¾
Tremont Lumber, Com.	2.00	.....	OW	.....	OW
U.S. Plywood, Com.	2.25	45¼	C	43⅝	C
Union Lumber Co., Com.	1.40	53	58	58	61
United States Lumber, Com.	.35	3¾	4¾	4⅛	5⅛
Upson Company, Com.	.40	10	11	11½	12½
Weyerhaeuser Co., Com.	1.10	32⅛	33⅝	35⅛	37
Winton Lumber Co., Com.	1.00	15	OW	15	OW
Wood Conversion Co., Com.	.45	9¾	10¾	11	12
Wooduse, Inc., Com. (Now Fersolin Corp., Com.)	.....	¾	1	⅝	⅞
BONDS					
Georgia-Pacific Corp. Subordinated Deb., 5s due 1976		89	94	89½	93

*—Information not available. BW—Bids Wanted. S—Stock. OW—Offerings Wanted. C—Last Sale on Exchange where listed or bid.

THE ABOVE INFORMATION, WHILE NOT GUARANTEED, IS OBTAINED FROM SOURCES WE BELIEVE TO BE RELIABLE

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Boise-Cascade Operating New Council, Ida., Sawmill

Features of the new plant include an overhead bridge crane to unload trucks, sort logs and serve the log deck, an aluminum carriage at the headrig and push-button control of the edger.

The plant replaces one destroyed earlier by fire.

The all-electric, double-band mill is designed to take logs up to 35 inches in diameter. Larger logs will go to the firm's mill at Emmett, Ida. Species cut will include Douglas fir, larch and white fir. No ponderosa pine will be cut.

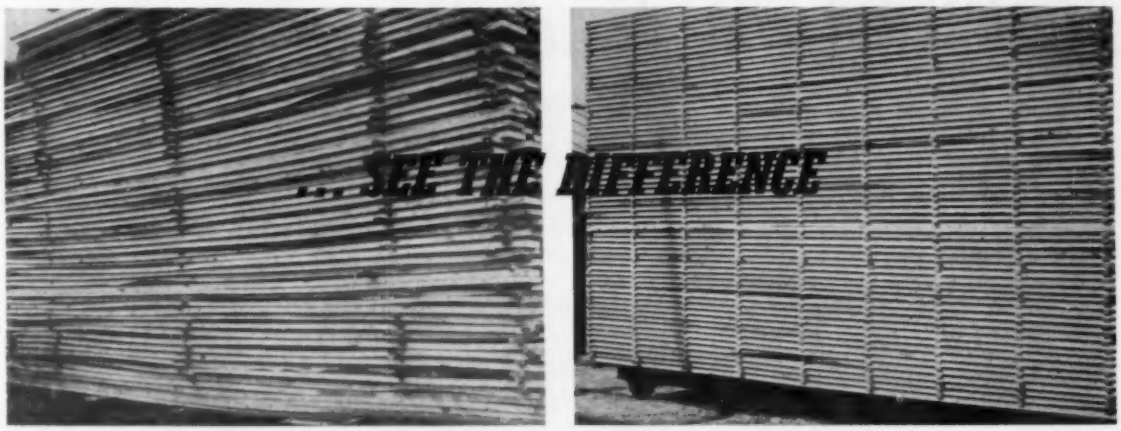
A mechanical barker and chipper will convert residue to chips for use at Boise-Cascade kraft paper mill at Wallula, Wash.

● Carl Jacobson, Grants Pass, Ore., has disposed of his holdings in Fir-Ply, Inc., Medford, Ore., and is no longer affiliated with the firm. Ernest A. Clark succeeds Mr. Jacobson as president and Robert W. Van Duker becomes general manager.

Technical Review Board Established by AITC

Smooth functioning of the recently established inspection program of the American Institute of Timber Construction will be provided by the Technical Review Board which will serve as an appeal agency for participants in the Quality Control and Inspection Program and in an advisory capacity on all technical matters.

L. J. Markwadt, recently retired as assistant director of the U. S. Forest Products Laboratory, will serve as chairman of the review board.



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ALASKA *(cont. from page 57)*

water shipping to the end of the railroad at Seward on the Kenai Peninsula and reloading there to rail cars.

Tom Morgan, president of Columbia Lumber Co. of Alaska, headquartered in Juneau, told THE LUMBERMAN, "We have to rely a good deal on the Alaska market, which is sometimes very good —but sometimes very poor."

It's feast or famine. The local market is quite dependent on the defense projects such as air bases and the huge communications projects in the interior and other back-country areas.

Mr. Morgan operates sawmills at Juneau and Sitka, and he also has retail yards in Juneau, Sitka, Anchorage and Fairbanks. He is rebuilding a bandmill which recently burned at Whittier on the railroad South of Anchorage.

The Koppers Co. is also building a treating plant at Whittier which will draw on Mr. Morgan's mill for raw material. The plant will provide creosoting, Wolmanizing and fire retardant treatment. Natural markets include the 63,000 ties used annually by the Alaska Railroad and the defense projects with their fire retardent lumber requirements.

Automation is new to Alaska milling. Many of the mills are comparatively old and have rather high manpower requirements. The first riderless carriages were just installed in 1960—those at the Wrangell Lumber Company and Ketchikan Spruce Mills.

One of Alaska's big problems is lack of a skilled labor pool. Quite often, overhead personnel and other specialists such as saw filers, edgerman, graders and sawyers must be imported from outside the state.

There are quite a few drifters among the mill hands. They travel from job to job and between the continental U. S. and Alaska. The high labor turnover contributes to high labor costs.

In general, utilization in the sawmills is sub-standard. Nearly all Alaska mills generate their own power with residues burned for fuel, but the burners claim a good deal of material.

As yet, there are no waste wood chippers in Alaska, but Ketchikan Spruce Mills plans installation of a chipper this year and, later, a barker. Pacific Northern plans an eventual barker and chipper at its Wrangell mill.

The pulp mills at Ketchikan and Sitka are operating entirely from round wood, but they would welcome steady nearby sources of chipped sawmill residues.

Alaska sawmilling has been underway for 150 years with the Russians operating mills in their colonial days. Americans have been sawing lumber in Alaska for more than 60 years, but it's still a pioneer land in forest products manufacturing. ■■

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DECK TYPE available in 4', 8' & 10' sizes.

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New Process Fireproofs Veneered Furniture Stock

"Finishield" plywood retains the beauty and authenticity of hardwoods, yet all exposed surfaces possess the resistance to cigarette burns, abrasion and solvents claimed by substitutes. It has been thoroughly tested in laboratories and furniture plants and has proven to meet these claims. And it costs less than laminated plastic substitutes.

"Finishield" was formally previewed at the recent National American Furniture Manufacturers Fair.

Howard Gatewood, executive vice-president of the Fine Hardwoods Association says "Finishield" plywood includes under the face veneer a sheet of Dri-Line aluminum foil which dissipates the heat of burning cigarettes and prevents surface damage. Unlike previous foils used for this purpose, this foil has an indefinite shelf life and comes already coated with thermosetting adhesive and requires only the heat and pressure of the hot press to form the bond.

"Finishield" has been thoroughly tested in both independent laboratory and in furniture and plywood plants and has exceeded the shear test requirements of CS-35-56 commercial standards for interior plywood.

Surface of "Finishield" may be either polyester finish or epoxy finish, which have also been thoroughly tested in independent laboratories and in furniture and plywood plants.

Gatewood says: "As to cost, we have determined that all materials for a "Finishield" ¾-inch top will run about 63 cents per foot when the polyester finish is used, and 59 cents per foot with an epoxy finish — as against 85 cents per foot for a ¾-inch top surfaced with a plastic laminate."

A "Finishield" process manual is available from Fine Hardwoods Association, 666 Lake Shore Drive, Chicago 11, Ill.

C-Z Names Personnel For New Oregon Mill

H. M. Stilson will be general superintendent of Crown Zellerbach Corp.'s new Columbia City sawmill in Oregon, according to W. E. Koch, Jr., resident manager of the company's northwest lumber and plywood division in St. Helens.

John Erickson will be head saw filer and Oscar Sauls and Clarence Racine will serve as foremen and millwrights.

Stilson has been associated with the Washington State Department of Natural Resources, the U. S. Forest Service and Pope & Talbot, Inc.

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Now . . . for your convenience you can obtain the high quality Sel-Set electronic setworks, plus fast, efficient parts and maintenance service from all Sel-Set dealers and distributors. Strategically located in key lumber producing areas, these leading machinery representatives and original equipment manufacturers are in a position to provide Sel-Set customers with even faster, more thorough service and maintenance, and better parts service. Each has available a complete line of Sel-Set "Select-O-Matic" electronic setworks and components, service and maintenance facilities and a complete parts stock. In addition, factory-trained engineers and installation crews are on call around the clock, ready to assist you with any automation problem. If you want the very best in setworks performance, plus the benefits of nationwide service facilities, "It will pay you to investigate Sel-Set Automation."

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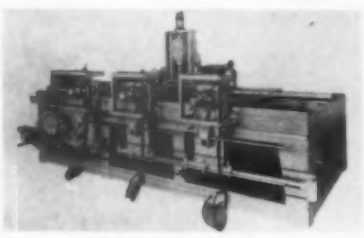
MACHINERY • SUPPLIES

Chassis Design Feature Of 1961 Chevy Trucks

Specifications. Refinements have been made to such 1960 features as independent front suspension with torsion springing and innovations in rear suspension. New cab features in 1961 emphasize a lower and narrower floor tunnel for most light-duty models for improved foot and leg room with the 3-speed or Powerglide transmission. New optional equipment includes a windshield wiper-washer combination with 2-speed electric wipers. Three new 4-wheel-drive models for light-duty, maximum traction application have been added. The 127-inch wheelbase, ½-ton vehicles are available as cab-chassis, wide-box pickup and conventional box pickup models rated from 4900 to 5600 pounds gross vehicle weight. Offered as an option is a crankcase ventilating system which ducts unburned hydrocarbons from the crankcase to the inlet manifold where they are funneled into the combustion chamber and burned with the fuel mixture.

Manufacturer. Chevrolet Motor division, General Motors Corp., General Motors Building, Detroit 2, Mich.

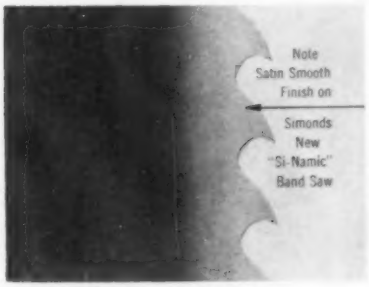


Automatic Machine For Hinges, Locks

Advantages. Automatically machines for hinges and locks in 12 seconds.

Specification. The KVAL 880 Automatic ideally works directly behind a KVAL double head edging machine (Model 550). It routs and drills simultaneously. Hinge routing mechanisms are actuated in the vertical direction by a cam. This movement is transmitted to all three mechanisms by a shaft with gears and racks. Horizontal movement is accomplished by an air cylinder. Doors are drilled for larger holes by two 2-hp motors. One drill comes down from the top, the other from the bottom in synchronized sequence.

Manufacturer. Kvalheim Machinery Co., Petaluma, Calif.



Long Life Claimed For Wide Band Saw

Specification. The new "Si-Namic" wide band saw is made of the same steel used on Simonds standard saw saws. A new process has been added called "Si-Namic." The process is said to eliminate major causes of cracking, crumbling, tension loss and swaging difficulties. The new wide band saws are available in all types, sizes and tooth dies.

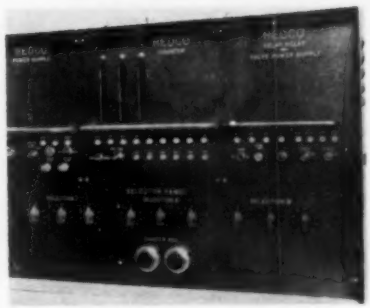
Manufacturer. Simonds Saw & Steel Co., Fitchburg, Mass.

System Speeds Output Of Wood Door Units

Advantages. Fast output with minimum labor requirement with compact unit.

Specifications. Four stages are: 1—sizing and boring machine sizes door, bevels it to desired width and degrees of bevel, sands and edges with a follow-up head, then completely bores for lock; 2—doors are routed for inside and outside jambs separately, eliminating any variance in door thickness; 3—casings are mitered and kerfed as two heavy-duty air cylinders hold casing in alignment; 4—assembly is made at air-operated table adaptable to any type jamb, casing or nailing. One man performing all operations can completely machine and assemble a door unit in 11 minutes.

Manufacturer. Cole Manufacturing Co., 789 South Fourth St., Memphis, Tenn.

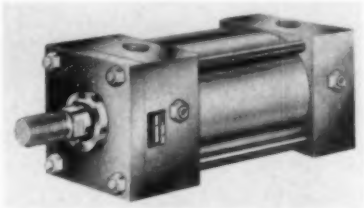


Clipper Timer Accurate To Within ¼-Inch

Advantages. Accurate and requires no electric eyes.

Specifications. Measuring wheel six inches in diameter rides on veneer at infeed side of clipper, transmitting pulses to the counter every 1/10-inch of veneer. Curling edges or slippage of veneer on conveyor belts do not affect accuracy. Preset selection switches in three groups on selector panel control width of clipper actuation. Each switch group provides coarse, medium and fine settings in increments of 10 inches, 1 inch and .1 inch per position. Clipping lengths can be changed quickly and accurately while clipper is operating. Random clipping thumb button resets timer instantly for next measured clip. Visual readout of count on control panel permits operator to constantly check accuracy and also facilitates maintenance.

Manufacturer. Republic Electric & Development Co., 2627 Western Avenue, Seattle 1, Wash.

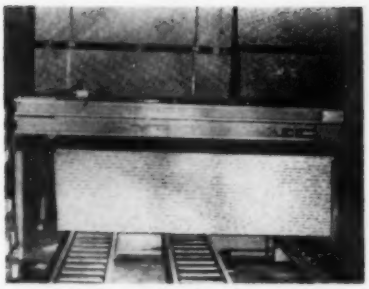


New Cylinder Works With Air or Hydraulic Systems

Advantages. Economy through dual use.

Specifications. The low pressure cylinder, S-P Series A, has reverse trim packings and multiple-lip rod wiper that cleans in two directions to deliver a dry rod on the outstroke. The interchangeable cylinder can be used for all types of industrial applications at pressures up to 200 psi air and 500 psi oil or water. Series A cylinders are available in 21 different mounting styles and 11 bore sizes from 1½ through 14 inches.

Manufacturer. S-P Manufacturing Corp., 30201 Aurora Road, Cleveland 39, Ohio.



Panel Stacker Adjusts To Size of Package

Advantage. Equipped with adjustable attachment, unit will adjust to handle any size panel from 30x60-inch to 60x120-inch.

Specifications. Stacker has eveners operated by air cylinders to even edges of stacks, and automatic controls to receive, stack, accumulate and discharge panels in packages all without interrupting production between packages. The stacker is available without the adjustable feature. If fixed, it can be supplied for any dimension panel. It can be supplied with or without the accumulator feature. Also, it can be equipped with a drop feed so each panel is carried into the stacker on sides and dropped vertically onto the stack or accumulator. It completes a cycle of unloading in about six seconds. End or side feed and end or side delivery are available.

Manufacturer. Keystone Machine Works, 526 N. E. Chestnut St., Roseburg, Ore.

Rig Crimps Slat Ends For Louver Door Assembly

Specifications. The Model 3531 Slat Swedger is an automatic air-operated, hopper-fed tool machine. The air cylinder automatically feeds each slat into position for the swedging dies. Two air cylinders with hard surfaced dies are timed with the feeder cylinder. Cycling is automatic with switch "on" at rate of up to 90 per minute. Machine is adjustable to feed widths from 1¼ to 2 inches and lengths from 5 to 24 feet.

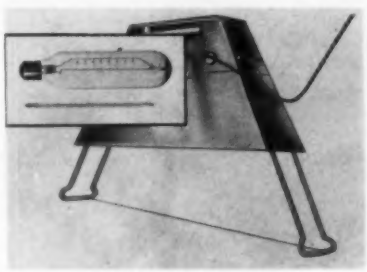
Manufacturer. Tri-State Machinery Co., 3000 Commerce St., Dallas, Tex.

Add-a-Unit Grainer Developed by Hamant

Advantages. Allows entry into panel graining on gradual basis.

Specifications. The MC-H158 initial unit is a powered unit for single-color wood grain printing. Additional units designed for close register operation are synchronized and driven by the powered master unit. They may be added at any time. A positive feed insures material reaching each unit at the proper moment to receive the printed image in exactly the correct position. Panels up to eight inches thick and 48 inches wide can be handled.

Manufacturer. Hamant Tool Co., Inc., 502 Warren St., Dayton 9, Ohio.



Guide Line Light Casts Sharp Shadow Line

Specifications. Q-15 guide line light has a 1500-watt bulb that is only ⅜-inch in diameter which will burn about 2000 hours without loss of efficiency. A special reflector, designed for use with the bulb, increases lumen output to delivery unusually clear marking lines in a pattern 18 to 22 inches wide with a useful length of 12 to 24 feet. The unit can project any desired number of parallel straight shadow lines, squares or rectangles, or can project a single white line for use on dark materials.

Manufacturer. Carter Products Co., Inc., Helmer Building, Grand Rapids, Mich.

Wheland Adds New Automatic Edger Tailer

Specifications. The automatic belt tailer, designed for use with edgers equipped with two simultaneously shifting saws, is arranged so that the board being edged is centered on the belt. Edging strips fall on right angle conveyor chains passing beneath tailer. Standard clean span between tailer supports permit 20-foot long strips to pass. Tailer may be driven from edger feed rolls. Simple belt take-up is provided.

Manufacturer. The Wheland Co., Chattanooga, Tenn.

Poppet Valve Requires Limited Amount of Space

Advantages. In addition to space saving, unit can be removed for maintenance without disturbing pipe connection.

Specifications. Both 3-and 4-way operation models are available. By rearranging internal parts, operation may be changed. Six different operators are interchangeable. Manual and mechanical operators (buttons, lever and cam) may be reset, overridden or safety interlocked by dual air piloting. Suitable for 250-psi maximum air or hydraulic pressure, and a temperature range of minus 40 degrees F. to plus 160 degrees F., these valves are made essentially of die cast zinc.

Manufacturing. Industrial Products division, Westinghouse Air Brake Co., Wilmerding, Pa.

Sorting Car Allows One-Man Operation

Application. Sorting poles after shaving.

Advantages. One man handles the entire pole sorting operation from the seat of a tractor equipped with hydraulic controls.

Specifications. The sorting car consists of an industrial tractor equipped with rail wheels and special hydraulic system. Two sorting cars are drawbar connected to the tractor. The cars are equipped with hydraulic powered, reversible, cross chains for unloading either right or left, and hydraulic powered drop stakes on both sides. When used with live deck, remotely controlled, the entire sorting operation is controlled from the tractor seat. The tractor is powered by a 4-cylinder, 40-hp engine. It is equipped with fluid drive to allow instant reversing with the right hand. The hydraulic controls are convenient for operation by the left hand. Forward and reverse speeds are the same.

Manufacturer. Nelson Electric Mfg. Co., P.O. Box 5385, Tulsa, Okla.

Heavy Duty Fork Lift Line Added by Towmotor

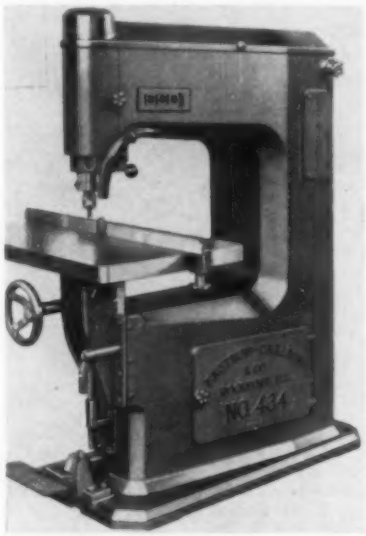
Specification. Monarch Series consists of eight models with lift capacity of 10,000 to 24,000 pounds. The line features a low profile envelope-type body to provide maneuverability and handling ease. Both gasoline and diesel powered models are available in wheelbases ranging from 86 to 120 inches. Wheelbase is matched with load capacity to maintain equalized weight distribution. The mast assembly has been strengthened through use of heavy channel section steel electrically welded. All load-carrying rollers are mounted on anti-friction bearings sealed from dirt and permanently lubricated.

Manufacturer. Gerlinger Carrier Co., division of Towmotor Corp., Dallas, Ore., and Cleveland 10, Ohio.

Magnetic Motor Starter Requires Little Space

Specifications. Two new units are available: size 2 for 10 to 25 hp, and size 2¼ for 15 to 30 hp. Unitized construction allows front removal of all components. Features include plug-in type push buttons or selector switches, easily added in the field. Thermal overload relays with trip indicator are trip-free and tamper-proof. Third overload can be added without changing enclosure. Magnet coils are molded type dual voltage (110/220 or 220/440) dual cycle (50-60). Coil has molded terminal board eliminating leads. Up to three auxiliary interlocks for pilot duty may be added.

Manufacturer. Furnas Electric Co., 1000 McKee St., Batavia, Ill.

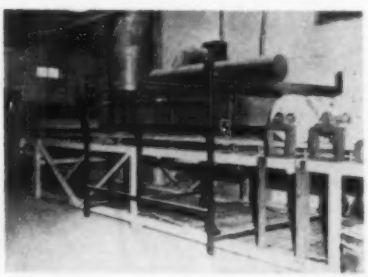


Router Sliding Spindle Works on Contour Shapes

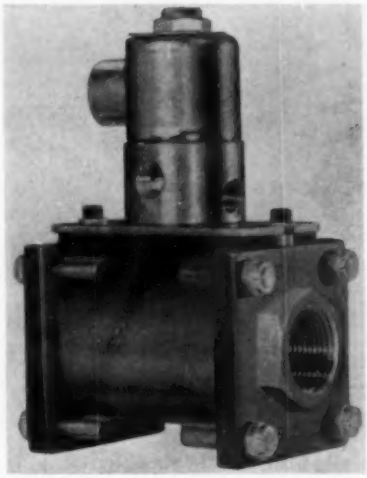
Advantages. Makes possible simple set-ups on routing machine for routing, shaping, grooving and other operations on contoured woods.

Specifications. Assembly consists of spindle bracket, guide holder and guide that is attached to the spindle. Counteracting springs, pins, studs and hooks are placed in the rear column. All of these parts are easily attached or removed.

Manufacturer. Ekstrom, Carlson & Co., 1440 Railroad Ave., Rockford, Ill.



Dry Clime Lamp Corp. driQuik ceramic type electric infra-red ovens speed finishing of laminated block flooring for Plyfloor, Inc., Beaumont, Miss. Two of the units work in the firm's finishing line. Filler on blocks is dried in 51 seconds, finish coat is dried in 42 seconds. Installation of the unit has increased production 200%.



New Valve Requires No Poppet or Spool

Advantages. No metal-to-metal or metal-to-rubber contacts.

Specification. Squeese action in the Tube-O-Matic valve automatically controls flow of air, oil, chemicals and even grinding slurries. When the valve is open, supply pressure through the inlet port forces an elastic rubber sleeve against the tube, forcing the media to flow around the inlet plug and through the outlet port. To close the valve, pilot pressure is applied between the inside diameter of the tube and the outer periphery of the rubber sleeve. This collapses the sleeve over the round ends of the inlets and outlet end plugs, sealing off the supply pressure. Pressures up to 200 psi can be handled.

Manufacturer. Airmatic Valve, Inc., 7313 Associate Ave., Cleveland 9, Ohio.

PERSONALITIES

Ted L. Cromer has been elected to the board of directors of Top Line Equipment Co., Portland, Ore., dealer for Clark Equipment Co.

New general managers at three Link-Belt Co. plants include T. Webster Matchett, formerly manager at the Caldwell plant in Chicago, at the Pershing Road plant in Chicago. He is succeeded at Caldwell by George Ramsden from the North Central division in Minneapolis and Ramsden in turn is succeeded at Minneapolis by Gerald A. Stone, district manager of the Dallas, Tex. office.

Donald G. Anderson has been appointed general sales manager of the forest and farm machinery department of Frick Co. The appointment permits William L. Fibben, manager of forest machinery sales, to devote his full time and effort to this activity.

L. S. STERNAL is new sales manager of Timesaver Sanders. Sternal has 12 years of experience in the coated abrasive and finishing industry and most recently was in sales with the coated abrasive division of Armour & Co.

L. S. Sternal

R. C. Jones

ROBERT C. JONES, divisional sales manager in Seattle, Wash., for Behr-Manning Co., has been named manager of Industrial Sales of the Portland, Ore., division in addition to his Seattle post.

LEE R. GENSMAN has been named chief engineer for L-M Equipment Co., Portland, Ore. He has 14 years of experience in this field, with Monarch Forge & Machine Works and Northwest Marine Iron Works.

L. R. Gensman

J. A. Cairns

Several personnel changes are announced at Hyster Co. JACK A. CAIRNS moves from the advertising and sales promotion department to the special products engineering department where he will handle dealer inquiries and make field sales calls for western region dealers. WILLIAM C. BREWER takes over supervision of advertising and sales promotion for the industrial truck division. HUGH RICHMOND is named supervisor of special products engineering department in Portland, Ore., and Danville, Ill., and DICK CHASE is named to supervise the special products engineering department branch in Danville.

New district managers for the western operations department of the Borden Chemical include FRANCIS W. LINEHAN for Washington and Canada, headquartering in Seattle; JOHN W. RUNKEL for Oregon, southern Idaho and Wyoming, headquartering in Springfield, Ore., and BENJAMIN B. BUTLER for California, headquartering in Los Angeles.

Frick Decentralizes National Sales, Service

Frick Co., Waynesboro, Pa., has established five new regional sales offices and announced its intention to provide closer support and cooperation with branch managers and distributors.

Coincident with this move, top sales management personnel has been realigned. David J. Wood, formerly manager of market planning, becomes national sales manager. George C. Briley is named manager of field sales and service, David E. Eddy is named manager of technical services, and Warren L. Bain is named manager of sales administration.

Regional managers are: John Sanders, Southern region in Houston, Tex.; Robert C. Robertson, Central region in Chicago, Ill.; R. H. Dyson, Northeastern region in New York City; Alan J. Vandermade, Western region in Palo Alto, Calif.

In New Ownership

General Bearing Co., a 25-year-old firm operated as a division of General Tool Co., has been purchased by LeRoy C. Andersen and Lester E. Andersen. Coincident with the purchase, General Bearing's office and warehouse activities were moved to a new location in Portland, Ore. Al Thornburg, long active with General, continues with the firm. The Andersens own Portland Iron Works, developer and manufacturer of production machinery, and also Power Transmission Products.

● White Motor Co. now calls its Pacific coast region its Western region and explains the change was made to more realistically reflect the true character of the territory. The area served includes California, Oregon, Washington, Montana, Idaho, Wyoming, Nevada, Utah, Colorado, Arizona, New Mexico, western Nebraska, western South Dakota, Alaska and Hawaii.

● L-M Equipment Sales Corp., Portland, Ore., has been named Pacific coast distributor for Esterer gang saws.

Obligatory Gift-Giving For Christmas Simplified

Gallery of Gifts, Inc., 80 Park Ave., New York City, has developed "Gift-Bookard" which consists of a combination personalized greeting card on the cover, a registered gift certificate in the form of a postage paid reply card on the back, and a booklet offering recipients a choice of 24 gifts.

Gift-Bookards are supplied with the personal or company name imprinted on the greeting card cover. The donor mails the Gift-Bookards to his list, each recipient selects a gift and mails the gift certificate to Gallery of Gifts.

Mater Machine Works In New Ownership

Appleton Machine Co., Appleton, Wis., has purchased Mater Machine Works, Inc., Corvallis, Ore., and will operate the firm as Mater division of Appleton. Milton H. Mater, former president of Mater, will be vice-president of the division. Ad Landers will continue as chief engineer and mill co-ordinator and Ted Stewart and Roy Meyers will continue to handle machinery installations and start-ups.

Purchase involves Mater company's manufacturing, sales and engineers, but no machinery or real estate in Corvallis. Sales and engineering will continue at Corvallis, with Mater in charge. Mater Engineering, a separate company, also was acquired and will be operated by Appleton.

● Western Machinery Co., Salt Lake City, Utah, has been named a franchise representative for the sale and service of Yale industrial lift trucks and tractor shovels. The firm has branch offices in Idaho.

IRVINGTON MACHINE WORKS, INC., is now located in a larger, suburban plant in Portland, Ore. The 28,000 square feet of plant, located on a 14½-acre tract, contains machine shops, machine assembly areas, parts storage, shipping and receiving facilities, engineering and business offices. In its large, central assembly bay, Irvington is able to erect complete automated lumber end-conditioning systems, many of them measuring 55x90 feet.

LUMBER PRICES

Douglas Fir

1x8	Utility S4S KD	$ 45- 50
2x4	Construction Dimension S4S KD	82- 84
1x4	C&Br VG flooring KD	180-185
1x6	C&Br Drop Siding KD	155-160
1x6	C&Br S4S KD	170-175
1x8	C&Br S4S KD	160-165
1x10	C&Br S4S KD	160-165
1x12	C&Br S4S KD	215-229
Construction Timbers and Plank		
3x12	6-20 feet	$ 89- 92
3x12	22-24 feet	92- 95
3x12	26-32 feet	97-100
4x4	8-20 feet	87- 90
4x4	22-24 feet	90- 93
4x4	26-32 feet	97-100
6x6	8-20 feet	87- 90
6x6	22-30 feet	91- 94
6x6	32-40 feet	99-102
8x8	8-20 feet	84- 87
8x8	22-30 feet	88- 91
8x8	32-40 feet	96- 99
6x6, 8x10, 10x10, 12x12—8-20'		82- 85
6x10, 8x10, 10x10, 12x12—22-30'		86- 89
6x10, 8x10, 10x10, 12x12—32-40'		94- 97
Construction Dimension (Green)		
2x2	6-24 feet	$ 68- 70
2x6	6-24 feet	69- 71
2x8	6-24 feet	68- 70
2x12	6-20 feet	69- 71
Standard & Better Boards (Green)		
1x4	6-20 feet	$ 40- 43
1x8	6-20 feet	51- 54
1x12	6-20 feet	54- 57

Douglas Fir Plywood

¼-inch AD S02S	$68

Southern Pine (KD Stock)

Vertical Grain Flooring		BB	C	D
1x4		$225	$215	$155
Flat Grain Flooring				
1x4		165	157	140
1x6		197	177	135
Drop Siding				
1x6	No. 106	197	184	137
1x6	No. 116	197	184	137
Boards and Shiplap		1x6	1x8	1x10	1x12
No. 1		$120	$130	$130	$172
No. 2		76	82	79	93
No. 3		57	66	64	66
No. 1 Dimension		12	14	16	18	20
2x4		$105	$105	$105	$120	$120
2x6		98	98	97	116	116
2x8		97	97	95	115	115
2x10		110	102	100	120	120
2x12		115	108	106	125	125
No. 2 Dimension		12	14	16	18	20
2x4		$ 99	$ 99	$ 99	$115	$115
2x6		92	91	90	112	112
2x8		92	88	86	105	105
2x10		91	93	90	105	105
2x12		100	100	100	118	120

Western Pine

Ponderosa Pine

Selects	4/4	5/4	6/4
C Select	$250	$260	$252
D Select	155	190	179
Shop	No. 1	No. 2	
4/4	$ 67	$ 52	
5/4	127	95	
6/4	126	94	
Commons	No. 2	No. 3	
1x8"	$ 83	$ 60	
1x12"	100	71	
4/4 No. 4 Common RW		$ 64	

Idaho White Pine

Select	4/4	6/4	
Choice	$270	$290	
Quality	175	245	
	Col.	Ster.	Std.
Common	(1)	(2)	(3)
1x8"		$109	$ 79
1x12"		137	85

Sugar Pine

Select	4/4	5/4	6/4
B&Btr Select	$281	$249	$287
C Select	272	253	276
Shop	No. 1	No. 2	No. 3
5/4	$127	$ 93	$ 67
6/4	128	95	74
8/4	151	109	73

Larch-Douglas Fir

4/4 No. 3 Common	$61
2x4 No. 1 Dimension	68
2x4 No. 2 Btr Dimension	71

California Firms Merge Into Single Company

Aborigine Lumber Co., Mendocino Truck Lease Co. and Mendo-Coast Lumber Co. have merged into a single corporation to operate under the Aborigine name. Aborigine has owned the other two firms for several years.

Aborigine operates two mills and a pre-fab plant at Fort Bragg. It operates a fleet of trucks for its own deliveries in California.

BUYERS GUIDE SECTION

Advertising Rates

(Standard advertising agency commissions apply)

1 to 44 inches per year	$14.00 per column inch
45 to 89 inches per year	$12.75 per column inch
90 to 179 inches per year	$11.50 per column inch
180 to 359 inches per year	$10.50 per column inch
360 or more inches per year	$10.00 per column inch

PROFESSIONAL CARDS
(Not commissionable)
All cards set in uniform style—⅞" deep by 2¼" wide. $12.00 per column inch. Special rate: $125 for 13 one-inch card insertions if paid in advance, to run within 52-week period, without copy change.

CLASSIFIED — POSITIONS & HELP WANTED
(No agency discounts on classified space)
30c per word, $7.00 minimum;
$2.00 additional for box number
60c per word for Display (Boldface) Type.

The LUMBERMAN

Next Issue December, closing November 7th

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CARRIAGES
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VENEER LATHES
TRAY SYSTEMS
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Literature on request

ZIDELL
MACHINERY & SUPPLY CO.
3121 S. W. Moody St Portland, Ore.
CA 8-8691

THE LUMBERMAN BUYERS GUIDE

ABRASIVES
The Norton Co., Worcester, Mass.; Los Angeles
Simonds Abrasive Co., Philadelphia, Pa.

ADHESIVES
American-Marietta Co., Seattle, Portland, New Westminster, B. C.
Borden Co., Chem. Div, New York City, Seattle
Monsanto Chemical Co., St. Louis, Mo.; Springfield, Mass.; Seattle, Wash.; Santa Clara, Cal.
Pacific Adhesives Co., Inc., Hillsboro, Ore.
Quaker Oats Co., Chemical Div., Chicago, Ill.
Reichhold Chemicals, Inc., White Plains, N. Y.; Seattle; San Francisco; Port Moody, B. C.

AIR COMPRESSORS—AIR TOOLS
Gardner-Denver Co., Quincy, Ill.; Seattle; Portland; San Francisco; Denver, Dallas
Portland Machinery Co., Portland, Ore.

AIR MOTORS
Gardner-Denver Co., Quincy, Ill.; Seattle; Portland; San Francisco; Denver, Dallas
Salem Equipment & Supply Co., Salem, Ore.

APPRAISALS
Caldwell Machinery Co., Portland, Ore.
General Appraisal Co., Seattle; Portland; San Francisco; Los Angeles; Spokane; Vanc., B.C.

AXLES
Eaton Mfg. Co., Axle Division, Cleveland, O.
Rockwell-Standard Corp., Transmission & Axle Div., Detroit, Mich.

BARKERS
Ederer Engineering Co., Seattle, Wash.
Filer & Stowell Co., Milwaukee; Portland
L-M Equipment Co., Portland, Oregon
Nelson Electric Mfg. Co., Tulsa, Okla.
Nicholson Mfg. Co., Auburn, Wash.
Prentice Co., E. V., Portland, Ore.
Sumner Iron Works, Everett, Wn.; Vanc., B.C.
Soderham Machine Mfg. Co., Talledega, Ala.; Portland, Oregon

BEARINGS
Bearing Sales & Service, Inc., Portland & Seattle
Dodge Manufacturing Corp., Mishawaka, Ind.
Link-Belt Co., Chicago, Seattle, Portland, San Francisco, Los Angeles, Spokane, Vanc., B.C.
Chain Belt Co., Schafer Bearing Div., Downers Grove, Ill.

BELTING and PACKING, Belt Accessories
B. C. Goodrich Co., Akron, Portland, Seattle
Goodyear Tire & Rubber Co., Akron, Ohio; Portland; Seattle
Raybestos-Manhattan, Manhattan Rubber Div., Passaic, N. J.
Scougal Rubber Mfg. Co., Seattle, Wash.
U. S. Rubber Co., Mech. Rubber Goods Div., NYC, Atlanta; Portland; San Francisco

BITS and SHANKS
Atkins Div. of Borg-Warner, Indianapolis
R. Hoe & Co., New York; Portland, Birmingham, Ala.
Simonds Saw & Steel Co., Fitchburg, Mass.; Portland

BLOWPIPE SYSTEMS
American Sheet Metal Works, Inc., Portland
Archer Blower & Pipe Co., Seattle & Portland
California Blowpipe & Steel Co., Escalon, Cal.
Medford Blow Pipe Co., Inc., Medford, Ore.
Phelps Bros., Eugene, Ore.; Williams Lake, B.C.
Rader Pneumatics, Inc., Portland; Vanc., B.C.

BOILERS
F. E. Balden Co., Portland
Clayton Manufacturing Co., El Monte, Calif.
Seattle Boiler Works, Seattle, Wash.

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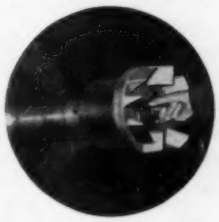

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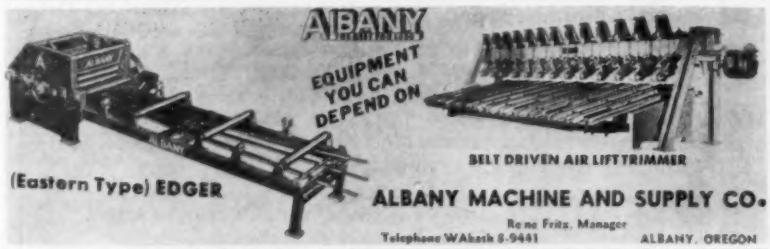

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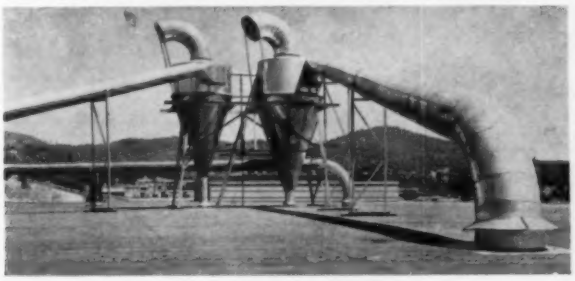

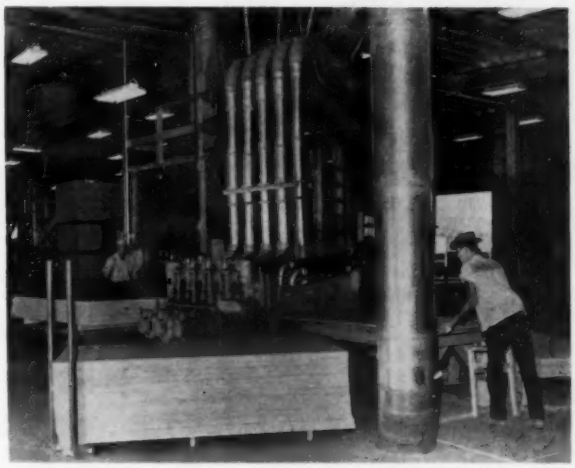

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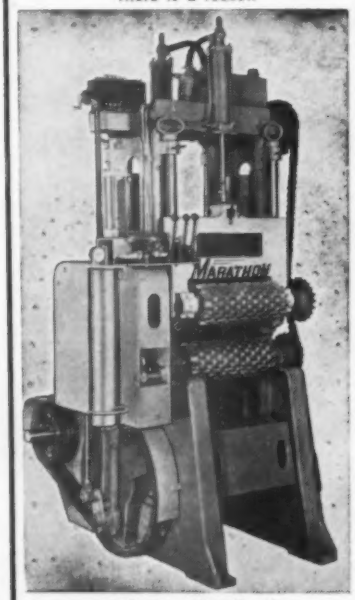

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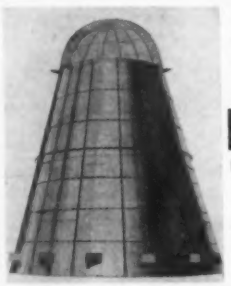

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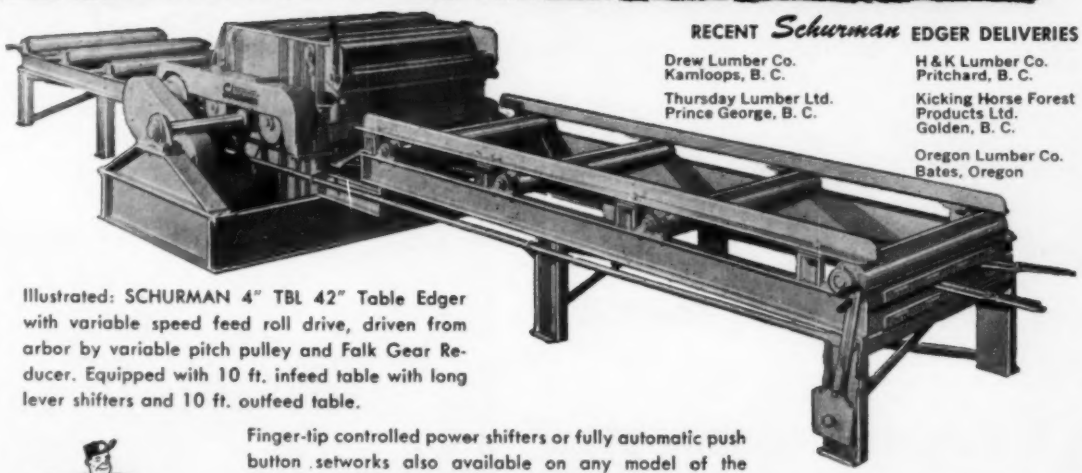

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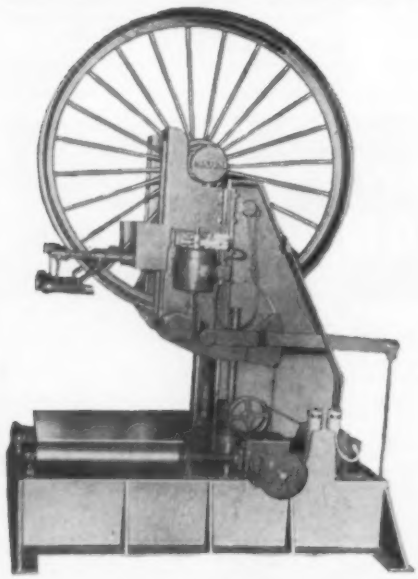

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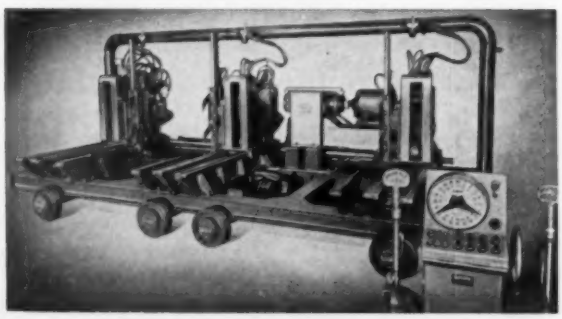

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Ederer Engineering Company, Seattle
Globe Manufacturing Co., Tacoma, Wash.
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Kenton Machine Works, Portland, Oregon
Kohler-Joa Corporation, Sheboygan Falls, Wisc.; Chehalis, Wash.
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Lamb-Grays Harbor Co., Hoquiam, Wash.
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Mereen-Johnson Co., Minneapolis
Moore Dry Kiln Co., North Portland, Ore.
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Peninsula Iron Works, Portland
Portland Iron Works, Portland
Prentice Company, E. V., Portland, Ore.
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Siempelkamp Co., Krefeld (Western Germany)
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Western Machinery Corp., Portland
Wilco Machine Works, Memphis, Tenn.
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Ward Construction Co., M. A., Eugene, Ore.
Western Machinery Corp., Portland
Wheland Company, Chattanooga, Tenn.
Yates-American Machine Co., Beloit, Wisc.; High Point, N. C.; Memphis; Portland.
Zidell Machinery & Supply Co., Portland

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Monarch Forge & Machine Works, Portland
Sel-Set Machinery Corp., Salem, Ore.
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Write TL Box 497, c/o THE LUMBERMAN
731 S. W. Oak Street, Portland 5, Oregon

YOUR AD IN THIS SPACE WILL REACH OVER 20,000 READERS EVERY MONTH

WANTED: Pine Production Superintendent for large SW sawmill. Qualified person will have charge of production from the log pond to RR car. Must know Pine grades in detail and manner in which to produce best quality lumber and by-products at low cost. First letter must contain complete resume and references.

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1—Jenkins #95A Double End Tenoner, w/12 Arbor Motors and 1 Feed Motor, all Motors Push Button Control, 84" Maximum Opening....$6,000.00
1—Wilkins-Challoner Double End Tenoner, w/12 Arbor Motors and 1 Feed Motor, All Motors Push Button Control, 84" maximum Opening $4,000.00
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1—Morgan Shook Splicer $500.00
2—#900 Diehl Electronic Splicers complete with 6.3 K.V.A. High Frequency Thermex Generators, (new 1955) $4,500.00 ea.
1—#137M Woods 6" Moulder with Random Length Hopper Feed $6,500.00
1—#59 Woods 26" Double Planer, 6 Knife Round Heads, Coupled to 30 HP Motor.....$2,000.00
1—Porter Cut-Off Saw $350.00
1—#B37 Falls Continuous Feed Glue Jointer $350.00
1—6" Vonnegut Moulder with Short Stock Feed Table $5,500.00
3—#139 Whitney 2 Sp. Shapers .....$500.00 ea.
2—#134 Whitney 2 Sp. Shapers .....$500.00 ea.
2—#247 Whitney 2 Sp. Shapers .....$500.00 ea.
1—#39A Whitney 2 Sp. Shaper $500.00
1—#39 Whitney 2 Sp. Shaper $500.00
1—Advance 2 Sp. Shaper, Belted to 2-5 HP Motors $800.00
1—Fay & Eagan Band Resaw, without Motor $250.00
3—31" Hamant Vertical Graining Machines $3,000.00 ea.
1—#90 Allington & Curtis Fan $750.00
1—#90 Allington & Curtis Fan, Direct Driven by 45C RPM, 40 HP Motor $1,250.00
2—Walters Lumber Transfers, Gas and Hydraulic Operated, 230" Wide, 86" Deep, Complete with Winch, (new 1956) $2,500.00 ea.
1—Cincinnati - Bickford 4'9" Radial Drill with 5 HP Motor $750.00

All Motors 220/3/60

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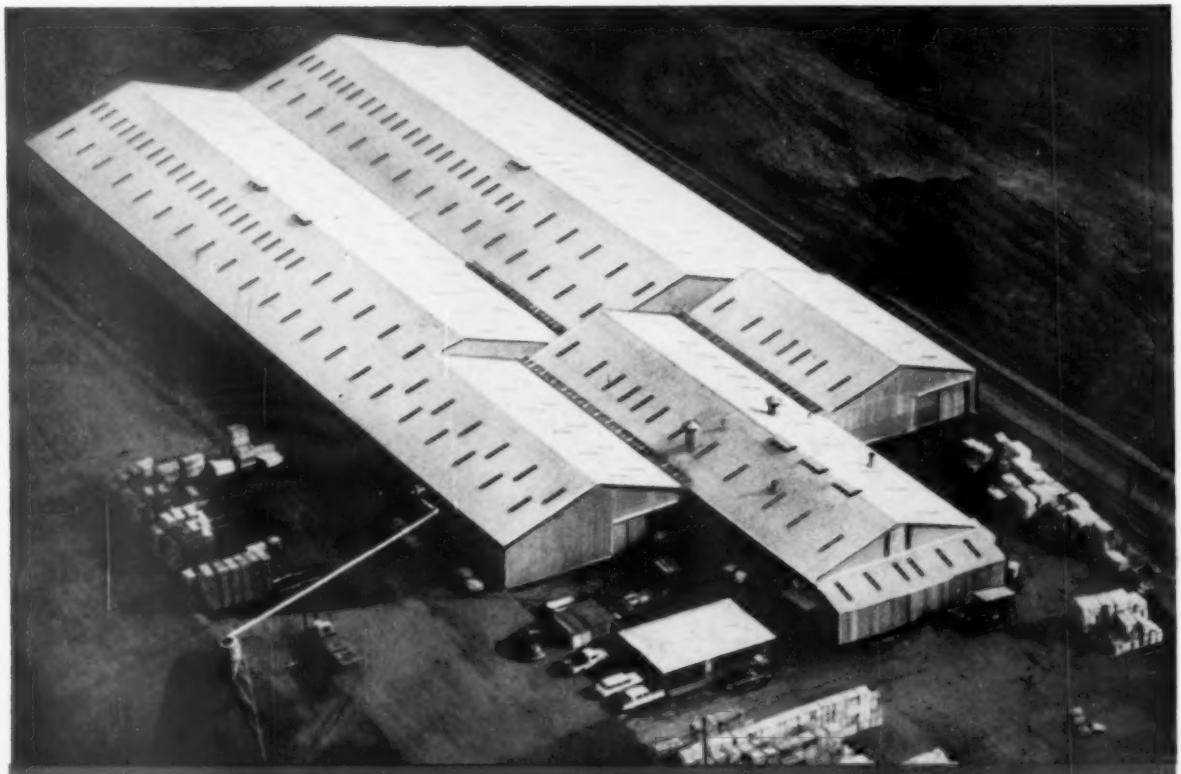
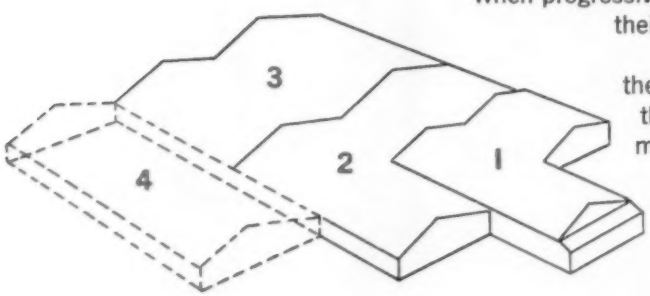
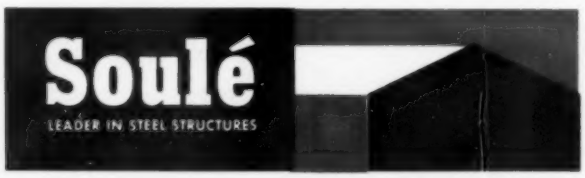


Soulé structures keep pace with fast growing Coquille Valley Lumber Co.



When progressive Coquille Valley Lumber Company plotted their growth plans, they included Soulé Series 412 steel structures. The photo shows the present facility. In the drawing, **1** shows the original plant area, **2** shows the planer mill addition, **3** the sheathing and plywood plant and **4** indicates the future sanded plywood plant. Because of their all-bolt construction, amazing clear work area, Soulé structures can be added quickly, at very low cost. Soulé structures can help your plant grow, too. Call for a planning chat.



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